1991-92

Brandeis University Bulletin

Graduate School of Arts and Sciences





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Section 2B of Chapter 151C of the Massachusetts General Laws provides that: "Any student [...] who is unable, because of his religious beliefs, to attend classes or to participate in any examination, study, or work requirements on a particular day shall be [so] excused..., and shall be provided with an opportunity to make up such examination, study, or work requirement which he may have missed because of such absence on any particular day; provided, however, that such makeup examination or work shall not create an unreasonable burden upon such school. No fees of any kind shall be charged . . . for making available to the said student such opportunity. No adverse or prejudicial effects shall result to any student because of his availing himself of the provisions of this

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Entered as second class matter at the Post Office at Boston, Massachusetts. Postmaster: Send address changes to Brandeis University Bulletin, P.O. Box 9110 Waltham, Massachusetts 02254-9110. It is the policy of Brandeis University not to discriminate against any applicant or employee on the basis of race, color, religion, sex, sexual orientation, age, national origin, disabled or Vietnam-era veteran, or handicap status. The University operates under an affirmative action plan and encourages minorities, women, Vietnam-era veterans and disabled veterans to apply, both in terms of employment and to all rights, privileges, programs and activities generally accorded or made available to its students. The University's Affirmative Action Plan is available for inspection at the Office of the Director of Affirmative Action and Government Regulation Compliance. Inquiries concerning discrimination may be referred to the Director, Office of Affirmative Action and Government Regulation Compliance.

Brandeis University has various resources and services available for individuals with physical impairments. Some of these include TDD machines for use by the hearing impaired and mobility accessible residence halls, dining facilities, and classrooms, along with a van service which is available 24 hours a day. For more information please call 617-736-3000 or write to the Affirmative Action Office.

Programs, requirements, fees and other information are set forth herein as they exist at the date of this publication. Brandeis University reserves the right to make changes without notice.

Academic Calendar 1991-92

Fall Term			Friday	December 27, 10:00 am	Fall term grades due in the Office of the University Registrar.
Monday	August 26	Registration for new and returning students.			Grades replacing Incompletes from spring term 1991 due. Final day for faculty
Thursday	August 29	First day of instruction.			certification that February master's candidates have completed degree requirements, including language(s)
Monday	September 2	No University exercises, staff holiday.			
Monday and Tuesday	September 9 and 10	No University exercises.			and theses, and that Ph.D. candidates have defended dissertations.
Wednesday	September 11	Course enrollment for graduate students.			Final day for February degree candidates to discharge any
Thursday and Friday	September 12 and 13	Final opportunity to enroll in courses.			financial indebtedness to the University.
Wednesday	September 18	No University exercises.	Friday	January 10	Final day for admission to
Thursday	September 19	Brandeis Monday. Monday class schedule in effect.			candidacy and completion of language requirement for students expecting to earn the Ph.D. in May 1992. Final day for February doctoral candidates to deposit dissertations at the Graduate School office.
Monday	September 23	No University exercises.			
Monday	September 30	No University exercises.			
Monday	October 14	Staff holiday, classes in session.	Spring Term		onice.
Friday	November 22	Brandeis Monday. Monday class schedule	Spring reim		
		in effect.	Friday	January 17	Registration for new and returning
Thursday and Friday	November 28 and 29	No University exercises.			students.
Monday	December 2	Last day for February degree candidates to	Monday	January 20	No University exercises.
		submit penultimate copies of dissertations	Tuesday	January 21	First day of instruction.
		to program chairs and to file Application for Degree with Graduate School office.	Tuesday and Wednesday	January 28 and 29	Course enrollment for graduate students.
Tuesday	December 10	Last day of instruction.	Monday	February 3	Last opportunity to enroll in courses.
Wednesday	December 11	Study day.	Monday	February 17	Staff holiday, classes in session.
Thursday through Thursday	December 12-19	Examination period. Winter Recess begins after last examination.	Monday through Friday	March 9-13	Midterm Recess.

	March 16	Last day for May degree candidates to	Wednesday	May 6	Last day of instruction.
		submit penultimate copies of dissertation	Thursday	May 7	Study day.
		to program chairs and to file Application for Degree with Graduate School office.	Friday	May 8	Final day for May doctoral degree candidates to deposit dissertations at the
	March 26	Final day for master's candidates to			Graduate School office.
			Thursday through Thursday	May 7-14	Final examination period.
		for completion of language requirements for students expecting to earn the Ph.D. in February 1993.	Monday	May 18	Grades due for all degree candidates by 10:00 am. Final day for faculty certification that master's candidates theses have
Monday	April 13	Staff holiday, classes in session.			been accepted.
F. 11 1	1 17 04	C D	Sunday	May 24	Commencement.
Friday through Friday	April 17-24	Spring Recess.	Monday	May 25	Staff holiday.
Friday	April 17	Final day for faculty certification that May Ph.D. candidates have defended dissertations. Final day for May degree candidates to discharge any financial indebtedness to the University.	Tuesday	May 26, 10:00 am	All spring term grades due in the Office of the University Registrar replacing Incompletes from fall term 1991.

Major Religious Holy Days Involving the Christian and Jewish Calendars During 1991-92

Fall Term

Monday and Tuesday	September 9 and 10	Rosh Hashanah
Wednesday	September 18	Yom Kippur
Monday	September 23	Sukkot
Monday	September 30	Shimini Atzeret
Wednesday	December 25	Christmas

Policy of Brandeis University pertaining to religious observances:

In constructing the academic calendar, religious holy days will not be the sole factor in determining days on which classes will be held or suspended. It is the policy of the University, however, that students be encouraged to observe their appropriate religious holy days, that instructors strive to facilitate this by allowing absence from classes for such purposes and by trying to insure that no examinations, written reports, oral reports or other mandatory class assignments are scheduled for or due on such holy days; and that instructors provide ample opportunities for such students to make up work missed on such occasions without penalty.

Spring Term

Friday	April 17	Good Friday
Saturday	April 18	Passover
Sunday	April 19	Easter
Friday	April 24	Orthodox Good Friday
Sunday	April 26	Orthodox Easter

Brandeis University is recognized as one of the linest private liberal arts universities in the United States. Named for the late United States Supreme Court Justice Louis Dembitz Brandeis (1856-1941), the University was founded in 1948 under Jewish sponsorship as a nonsectarian institution offering the highest quality undergraduate and graduate education. It received accreditation within five years, the shortest possible time, and was awarded recognition by Phi Beta Kappa in 1961, only 13 years after its founding — the youngest institution to be so honored in more than 100 years.

Of the approximately 2,000 accredited colleges and universities in the nation, Brandeis is one of ouly 100 institutions recognized as research universities. Brandeis is a member of the Association of American Universities and is accredited by the New England Association of Schools and Colleges. Because of its research capabilities and size, Brandeis is able to combine the breadth of range of academic programs usually found at much larger universities with the intimate educational atmosphere of an undergraduate college.

For full information on the undergraduate curriculum, see the *Bulletin of the College of Arts and Sciences*.

Brandeis University is a community of scholars and students united by their commitment to the pursuit of knowledge and its transmission from generation to generation. As a research university, Brandeis is dedicated to the advancement of the humanities, arts, social, natural and physical sciences. As a liberal arts college, Brandeis affirms the importance of a broad and critical education in enriching the lives of students and preparing them for full participation in a changing society, capable of promoting their own welfare, yet remaining deeply concerned about the welfare of others.

In a world of challenging social and technological transformation, Brandeis remains a center of open inquiry and teaching, cherishing its independence from any doctrine or government. It strives to reflect the heterogeneity of the United States and of the world community whose ideas and concerns it shares. In the belief that the most important learning derives from the personal encounter and joint work of teacher and student, Brandeis encourages both undergraduates and postgraduates to participate with distinguished faculty in research, scholarship and artistic activities.

Brandeis was founded in 1948 as a nonsectarian university under the sponsorship of the American Jewish community to embody its highest ethical and cultural values and to express its gratitude to the United States through the traditional Jewish commitment to education. By being a nonsectarian university that welcomes students and teachers of every nationality, religion and political orientation, Brandeis renews the American heritage of cultural diversity, equal access to opportunity and freedom of expression.

The university that carries the name of the Justice who stood for the rights of individuals must be distinguished by academic excellence, by truth pursued wherever it may lead and by awareness of the power and responsibilities that come with knowledge.

As adopted at the meeting of the Board of Trustees, December 6, 1984.

Brandeis University is accredited by the New England Association of Schools and Colleges, Inc., a nongovernmental, nationally recognized organization whose affiliated institutions include elementary schools through collegiate institutions offering postgraduate instruction. Accreditation of an institution by the New England Association indicates that it meets or exceeds criteria for the assessment of the institutional quality periodically applied through a peer group review process. An accredited school or college is one that has available the necessary resources to achieve its stated purposes through appropriate educational programs, is substantially doing so and gives reasonable evidence that it will continue to do so in the foreseeable future. Institutional integrity also is addressed through accreditation.

Accreditation by the New England Association is not partial but applies to the institution as a whole. As such, it is not a guarantee of the quality of every course or program offered or the competence of individual graduates. Rather, it provides reasonable assurance about the quality of opportunities available to students who attend the institution.

Inquiries regarding the status of an institution's accreditation by the New England Association should be directed to the Office of the Provost and Dean of the Faculty, Brandeis University, P.O. Box 9110, Waltham, MA 02254-9110. Individuals may also contact the Association: Commission on Institutions of Higher Learning, New England Association of Schools and Colleges, Inc., The Sanborn House, 15 High Street, Winchester, MA 01890, 617-729-6762.

The Graduate School of Arts and Sciences

History and Organization

The Graduate School of Arts and Sciences was formally established in 1953 when the University's Board of Trustees authorized graduate study in the departments of chemistry, music, psychology and Near Eastern and Judaic studies. The general direction of the Graduate School is vested in a Graduate Council of the Faculty comprised of the President and the dean of the faculty, ex-officio; the dean of the Graduate School; and one representative, usually the chair, of each of the several University departments and committees offering graduate instruction. The members of the Graduate Council are appointed by the President on the recommendations of the dean of the Graduate School. The functions of the Graduate Council, exercised in consonance with University policy, are to determine requirements for admission; provide programs of study and examination; establish and maintain requirements for graduate degrees; approve candidacy for degrees; make recommendations for degrees; make recommendations for new areas of graduate study; lay down such regulations as may be considered necessary or expedient for governing the Graduate School; and exercise a general supervision over its affairs. The dean of the Graduate School is the chair of the Graduate Council and the chief executive officer of the Graduate School.

Objectives

The underlying ideal of the Graduate School is to assemble a community of scholars, scientists and artists, in whose company the student-scholar can pursue study and research as an apprentice. This objective is to be attained by individualizing programs of study, restricting the number of students accepted, maintaining continual contact between students and faculty and fostering the intellectual potential of each student. The graduate programs are designed to educate broadly as well as train professionally. Degrees are granted on the evidence of intellectual growth and development, rather than solely on the basis of formal course credits. Fulfillment of the minimum requirements cannot, therefore, be regarded as the sole requisite for degrees.

Areas of Graduate Study

During the academic year 1991-92, graduate programs will be offered in the following areas:

- 1. Anthropology
- 2. Biochemistry
- 3. Biology
- 4. Biophysics
- Chemistry 6. Comparative History
- Computer Science
- 8. English and American Literature
- 9. History of American Civilization 10. International Economics and Finance
- 11. Jewish Communal Service
- 12. Joint Program of Literary Studies
- 13. Mathematics
- 15. Near Eastern and Judaic Studies
- 16. Physics
- 17. Politics
- 18. Psychology and Cognitive Science
- 19. Sociology 20. Theater Arts

Graduate School

The Graduate School office is located in the Rabb Graduate Center. The office is open Monday through Friday from 9:00 am to 5:00 pm. All requests for information, catalogs and application forms should be addressed to the Dean of the Graduate School of Arts and Sciences, Brandeis University, P.O. Box 9110, Waltham, MA 02254-9110.

University Libraries

The Brandeis University Libraries, consisting of the Main Library and the Gerstenzang Science Library, have combined collections of 890,000 volumes, 780,000 microforms, 320,000 U.S. documents, 7.600 serials and 63 newspapers.

The Main Library, comprised of the Bertha and Jacob Coldfarb Library and the Rapaporte Treasure Hall, houses collections supporting the humanities and the social sciences, Judaica and creative arts. In addition, the Library is a selective government document depository, comphasizing labor, health, politics and statistics. There is also a legal reference collection, providing sources on both the state and federal levels.

The Judaica department's reading room houses one of the country's most important collections of reference materials and basic texts pertaining to Judaic and Islamic studies, the ancient

Near East and the modern Middle East. Current periodical indexes relating to these disciplines are also housed in the reading room.

The Norman and Rosita Winston Creative Arts Center houses the collections and facilities in music and fine arts. Over 13,000 volumes, emphasizing scholarly editions in medieval, Renaissance and baroque music, make up the musical score collection. In addition, there is a 1,500-volume creative arts reference collection. The sound recording collection contains over 15,000 discs, tapes and cassettes with facilities to accommodate 72 listeners.

The Rapaporte Treasure Hall is the home of the Special Collections department and the Vito Volterra Cultural Center. This section includes the rare books collection, the manuscript collection and some Brandeis archival material. Among the most important collections are the Spanish Civil War Collection, the Leonardo Da Vinci Collection, the Vito Volterra Collection on the History of Science and Mathematics, the McKew-Par Collection on Magellan and the Age of Discovery and the Justice Brandeis Collection.

The Gerstenzang Science Library, located within the science complex to allow convenient access by its users, contains the collections supporting the physical and natural sciences and mathematics. Containing more than 140,000 volumes and over 900 periodical subscriptions, the Library is a reference and research facility for the science complex, providing materials for advanced independent work as well as supporting instructional programs.

The Brandeis University Libraries use an integrated automated system known as LOŬIS (Library Online User Information System). As an online catalog, it offers access to most of the library materials in the University Libraries through terminals located around the library and through the campus network.

The newest unit in the Brandeis University Libraries is the Intercultural Library Located on the lower level of Morton May, the Library houses a selective collection of books, reference works and current periodicals focusing on Asian. African and Latino cultures and their relationship to the American experience. The Library provides access to the online catalog of the entire Brandeis Libraries system, study space for individuals and small groups and hosts a variety of cultural programs.

Admission

Special services are available in the Libraries to assist in the research process. One of the newest services is a number of research databases on compact discs in both the Main Library and the Gerstenzang Science Library. Librarians provide computerized literature searches of databases on a cost recovery basis. Access is available through BRS, Dialog, NLM (National Library of Medicine) and CAS (Chemical Abstracts Service). Other databases are available on CD ROM for researchers to search on their own. Orientation to the libraries and instruction in the use of the collections are available by request at the reference desks. The Interlibrary Loan Service provides books or photocopies of materials not owned by the University Libraries. Brandeis is a member of the Boston Library Consortium, comprised of 12 academic and research institutions in the Boston area. The consortium provides virtually free interlibrary loans, a union list of serials and cooperative access to collections.

As a rule, only well-qualified men and women who have completed the normal four-year program leading to the bachelor's degree will be considered for admission to the Graduate School. Graduates of foreign schools and others who have completed the equivalent of a bachelor's degree program may apply, describing the educational program they have completed.

Testing

Applicants for admission to the graduate programs in anthropology, biochemistry, biology, biophysics, chemistry, computer science, English, politics and psychology must submit results of the Graduate Record Examination (GRE). Applicants to the Lemberg Program in International Economics and Finance must submit results of either the GRE or Graduate Management Admission Test (GMAT). Applicants to the Hornstein Program in Jewish Communal Service must submit the results of either the GRE or the Miller Analogies Test. All other applicants are urged to take the GRE Consult specific programs for additional test requirements. In order for the results of the GRE to be considered, the applicant should take the examination no later than January preceding the academic year for which application is made. Information concerning the GRE is available from the Educational Testing Service, Princeton, NJ 08541-6155.

International students, regardless of field of graduate study, are required to take the Test of English as a Foreign Language (TOEFL). They are also advised to take the Test of Written English (TWE) and Test of Spoken English (TSE) unless English is their first language. Applications for admission to the test should be made to TOEFL, Educational Testing Service, Princeton, NJ 08541-6155, USA. The test is administered at various established centers abroad.

Application

Specific requirements for each graduate program are to be found under the appropriate headings in this catalog. Each applicant should consult these requirements before filing an application. A student may apply to only one graduate program. An applicant to the Graduate School should write to the dean of the Graduate School of Arts and Sciences. stating which program of study he or she wishes to enter. A catalog with appropriate forms will be forwarded to the applicant. The Application for Admission should be completed and returned in duplicate as soon as possible. Applicants requesting financial aid must file a CAPSFAS form. Closing dates for

receipt of applications by the graduate programs are included with application information.

Applications for admission for the spring term must be filed by December 1. Students are not usually admitted at midyear, and those who do gain admission are not normally eligible for financial aid.

All applicants must arrange to forward, in duplicate, official transcripts of all undergraduate and graduate work. In addition, they must submit two letters of recommendation, preferably from professors with whom they have studied in their proposed area of study. Applicants who have engaged in graduate study elsewhere should request at least one of the recommendations from a professor with whom they have done graduate work.

Many departments also require the submission of samples of work as well as the materials described above. Applicants should consult program requirements in a later section of this catalog for enumeration of additional materials to be submitted.

All applications must be accompanied by the application fee, payable by check or money order to Brandeis University. No application will be processed until this fee is paid. Application fee waivers will not be granted unless the applicant is from a country where foreign exchange controls prevent overseas payments, or the applicant's need for a waiver can be verified by a letter from a college financial aid officer.

Admission Procedure

All applicants are considered on a competitive basis. The number of students admitted each year in each program is limited so that the Graduate School may operate effectively under its distinctive principles of individualized study and apprenticeship. Consequently, admission may sometimes be denied to qualified persons. Meeting the minimum standards of admission merely qualifies the applicant for a place in the group from which final selections will be made. Selections are based on the applicant's ability to do graduate work of high quality, as shown by: the distinction of his or her previous record, particularly in the proposed area of study; the letters of recommendation submitted in support of the application; and his or her presumed adaptability to the particular graduate programs offered by Brandeis University. In addition, knowledge of foreign languages, relevant practical experience in the field, samples of work, the results of the GRE and indications of character are considered.

International Students

Each application for admission with all supporting records is first examined by the appropriate program committee. The committee recommends to the dean of the Graduate School which applicants should be selected for admission and financial aid. The dean reviews all applications in the light of the program's recommendations and informs each applicant of the results in April.

Acceptance

A student who has been accepted for admission to the Graduate School will be notified by a letter specifying the date by which he or she must accept the offer of admission and awards, if any. If a student selected for admission indicates that he or she does not intend to accept the offer or fails to reply by the date specified, the admission offer becomes void and another applicant may be accepted.

Brandeis University subscribes to the "Resolution Regarding Scholars, Fellows, Trainees and Graduate Assistants" of the Council of Graduate Schools in the United States. The resolution states:

"Acceptance of an offer of financial support (such as a graduate scholarship, fellowship, traineeship or assistantship) for the next academic year by a prospective or enrolled graduate student completes an agreement that both student and graduate school expect to honor. In that context, the conditions affecting such offers and their acceptance must be defined carefully and understood by all parties. Students are under no obligation to respond to offers of financial support prior to April 15; earlier deadlines for acceptance of such offers violate the intent of this Resolution. In those instances in which a student accepts an offer before April 15, and subsequently desires to withdraw that acceptance, the student may submit in writing a resignation of the appointment at any time through April 15. However, an acceptance given or left in force after April 15 commits the student not to accept another offer without first obtaining a written release from the institution to which a commitment has been made. Similarly, an offer by an institution after April 15 is conditional on presentation by the student of the written release from any previously accepted offer. It is further agreed by the institutions and organizations subscribing to the above Resolution that a copy of this Resolution should accompany every scholarship, fellowship, trainceship, and assistantship offer."

Students who are accepted must provide the Graduate School office with an official final transcript of their undergraduate record and any graduate work in process at the time of acceptance. In addition, students who are accepted are required to complete and return a medical questionnaire and a health insurance form, which will be sent during the summer. Registration is conditional upon receipt by University Health Services of these required forms.

If, after having been admitted, a student cannot attend, he or she should notify the dean of the Graduate School as soon as possible. If such students are to be admitted for a subsequent academic year, they must request reactivation of their applications at the appropriate time and bring them up to date.

Applicants who have been denied admission may reapply in a later year, particularly if they have had further training that would strengthen their applications or if they can submit additional letters of recommendation.

Admission to the Graduate School does not imply that the successful applicant has been accepted as a candidate for a graduate degree. Superior performance at Brandeis University is essential. Admission to candidacy for the M.A. or M.F.A. is granted by the graduate program administering the program of study. Admission to candidacy for the Ph.D. is granted by the Graduate Council on the recommendation of the program administering the program administering the program administering the study.

Readmission

Admission is valid only for one academic year. A student's record is reviewed annually and recommendations for readmission are made by the graduate programs. Students accepting readmission must submit to the Graduate School one of two financial aid forms, either the GAPSFAS or the Application for Federal Student Aid, which are provided by the Graduate School.

Graduates of international colleges and universities who have the equivalent of an American bachelor's degree and international students who have graduated from American universities may compete for admission and financial assistance at Brandeis, which is authorized under federal law to enroll nonimmigrant alien students.

Applications by international students must be completed and returned by February 1 of the year in which the student seeks fall admission. Successful applicants will be notified as soon as possible.

Entrance Examinations. All applicants whose native language is not English must take the Test of English as a Foreign Language (TOEFL). Thorough competence in English is required for study at Brandeis. They are also advised to take the Test of Written English (TWE) and Test of Spoken English (TSE). Applicants should consult specific programs for additional test requirements. For information concerning the administration of the TOEFL, write to the Educational Testing Service, Princeton, NJ 08541-6155.

Financial Aid. Financial aid in the form of scholarships, fellowships, teaching assistantships and research assistantships is available to only a few of the most outstanding students. In any case, the total assistance offered usually covers only a small proportion of the student's total annual expenses. Hence students, when applying for admission, should indicate a means of financial support. At least \$8,875 in United States currency is necessary to cover living costs for the nine-month academic year, exclusive of expenses for tuition, travel and summer or vacation periods.

Employment. The regulations of the United States Immigration and Naturalization Service limit strictly the amount of paid work that a student from abroad may do. During the summer vacation, INS may permit a student to obtain off-campus employment. However, such permission cannot be guaranteed. Students must petition on special United States government forms, through the Office of International Programs, for permission to accept such employment.

Requirements for the Degree

The following general requirements apply to the award of graduate degrees in all areas of study. For specific program requirements students should consult the appropriate section of this catalog.

Master of Arts

In order to qualify for a master's degree, the student must complete the equivalent of one full year of graduate study at Brandeis University, ordinarily computed at a minimum of eight term courses of approved study. Programs may, at their option, require more than eight term courses of graduate study. Programs offering master's programs may require that the candidate demonstrate a reading knowledge of at least one foreign language and pass satisfactorily a general or qualifying examination which, at the program's discretion, may be in one or more parts and may be written, oral or both. Where a thesis is required for the master's degree, two copies must be submitted to the program chair in final form no later than the first Friday in January for a February degree or May 1 for a May degree.

The master's degree must be earned within four years from the inception of graduate study at Brandeis University.

Master of Fine Arts

In order to qualify for the degree of Master of Fine Arts in Music, the candidate must complete with distinction 12 term courses at the graduate level and must meet the specific requirements for the degree as set forth under Music, Requirements for the Master of Fine Arts Degree, in a later section of this catalog. Two copies of the thesis or composition must be submitted to the department chair in final form no later than the first Friday in January for a February degree or May 1 for a May degree.

In order to qualify for the degree of Master of Fine Arts in Theater Arts, the candidate must complete the specific requirements for the degree as outlined under Theater Arts, Requirements for the Master of Fine Arts Degree, in a later section of this catalog. Students enrolled for specialization in dramatic writing must submit two copies of a play in final form in lieu of a thesis.

The Master of Fine Arts degree must be earned within five years from the inception of graduate study at Brandeis University.

Doctor of Philosophy

In order to qualify for the degree of Doctor of Philosophy, a student must ordinarily complete a minimum of three years of graduate study, including two full years of residence and a third year devoted to the preparation of a doctoral dissertation. Under certain conditions, credit for advanced standing will be granted for work taken in residence in graduate schools of other universities. Each program reserves the right to require prospective candidates for the degree to perform work in excess of its minimum standards to assure thorough mastery of the area.

Prospective candidates may be required to demonstrate proficiency in at least one foreign language. In all areas of study the student must satisfactorily pass a general or qualifying examination which, at the program's discretion, may be in one or more parts and may be written, oral or both. In addition, all prospective candidates must write a doctoral dissertation and defend it in a Final Oral Examination.

To be eligible for the Ph.D. degree in a given year, the student must have (1) been admitted to candidacy for the doctorate, (2) completed all residence requirements and (3) passed all language and qualifying examinations by the close of the term preceding the term in which the degree will be conferred.

Students entering Brandeis University with no previous graduate work must earn the doctorate within eight years from the inception of study. Students who are granted credit for a year of graduate work completed elsewhere must earn the degree within seven years from the inception of their study at Brandeis.

Language Requirements

There is no University requirement for foreign language competency at either the master's or doctoral level.

Each program determines which languages are acceptable as satisfying its foreign language requirement. Some programs may not require foreign language competency, while others may set requirements that will vary within the subfields offered by those programs. In programs where languages are required, students are expected to satisfy the requirement as soon as possible. Completion of this requirement at another university does not satisfy the Brandeis requirement.

For specific requirements of each program, consult the program listing in this catalog.

Admission to Candidacy

A student who has a) demonstrated a knowledge and mastery of the subject matter of the field at a level satisfactory to the program, (b) passed all program qualifying examinations, (c) indicated a capacity for independent research of high quality and (d) completed satisfactorily all specific program requirements for admission to candidacy may, at the recommendation of the program, be admitted under the rules of the Graduate Council to candidacy for the degree of Doctor of Philosophy. In order to be eligible for the degree, the student must be admitted to candidacy at least one term before it is awarded.

Application for Graduate Degrees

Candidates for the M.A., M.F.A. and Ph.D. degrees must file with the Graduate School office an application for the degree no later than December 1 for a February degree and no later than March 1 for a May degree of the academic year in which the degree is to be conferred. Upon written recommendation from a candidate's program or committee that the application be approved, the record will be reviewed by the Graduate Council, which recommends the student to the University's Board of Trustees for the award of the degree. In case of failure or withdrawal from candidacy in any year, the student must reapply by filing a new application in a later year.

Dissertation and Final Oral Examination

When a student is ready to write the doctoral dissertation, a Dissertation Reading Committee of no fewer than three faculty members, at least one of whom is a tenured member of the faculty, will be appointed by the chair of the student's program. The student's principal advisor will serve as the chair of this committee. The Dissertation Reading Committee will guide the research for and preparation of the dissertation. When this committee certifies its approval of the dissertation to both the dean of the Graduate School and the chair of the student's program, the

Academic Regulations

latter, with the approval of the dean of the Graduate School, will appoint a Dissertation Examining Committee to preside over the student's Final Oral Examination and will notify the candidate of the time and place of the Final Oral Examination at least three weeks prior to the scheduled date of the examination. Two copies of the dissertation, as well as an abstract of no more than 350 words, should be submitted to the Dissertation Reading Committee for approval. The style and format of the dissertation is determined by each program.

The dissertation, when approved by the readers, must then be deposited in the program office where it will be available for inspection by all interested members of the faculty for at least two weeks prior to the Final Oral Examination.

The program will publish the time and place of the candidate's Final Oral Examination and the title of the doctoral dissertation. The Final Oral Examination will be open to any member of the faculty engaged in graduate instruction and invited faculty members from other institutions.

The Dissertation Examining Committee, recommended by the program chair and approved by the dean of the Graduate School, must be comprised of a minimum of three faculty examiners, at least one of whom shall be a tenured member of the faculty and one of whom shall be from a graduate program outside the student's own, in a related area. The latter may be a faculty member from another university.

The examination may be restricted to a defense of the dissertation or may cover the whole field of the dissertation. The candidate will be notified by his or her program of responsibility for coverage prior to the examination.

A report, signed by the Dissertation Examining Committee, certifying the candidate's successful performance on the Final Oral Examination, will be submitted to the dean of the Graduate School.

If the Dissertation Examining Committee requires substantial revisions of the dissertation text, the revisions must be completed and accepted by the Committee within six months of the dissertation defense, otherwise the dissertation will be redefended.

Deposit and Publication of Dissertation

No later than the dates specified in the current Academic Calendar for February and May degrees, the candidate must deposit in the Craduate School two copies of the finished dissertation, including the original typescript, in a state suitable for microfilm and Xerox publication. Both copies of the dissertation must have the signed approval of the dissertation supervisor and readers. One copy will be retained by the library, the other will be returned to the student, both bound. The candidate must also submit two copies of an abstract of the dissertation, not to exceed 350 words, that has been approved by the dissertation supervisor.

A detailed statement of the Graduate School publication regulations is available from the Graduate School office. See also the statement in this catalog, under Fees and Expenses, on the Final Doctoral Fee.

Registration

Every resident student must register in person at the beginning of each term, whether attending regular courses of study, carrying on research or independent reading, writing a thesis or dissertation or utilizing any academic service or facility of the University. Students who have completed their residence requirements and who wish to utilize any academic service or facility of the University must also register.

There is a charge of \$20 if registration is not completed at the time specified in the Academic Calendar.

Registration consists of filing a Registration Card and other duly completed required forms. Enrollment Cards are filed at a later date.

Program of Study

Before filing an Enrollment Card, the student should plan a program of study in consultation with the chair or graduate advisor of the program. All courses for which the student registers for credit must be listed on the Enrollment Card.

Audited courses must also be listed, noted as "audit," and the Enrollment Card must be signed by instructors of such courses.

Graduate students may not register for an undergraduate course (numbered below 100) for degree or residence credit unless they secure the signed approval of both the instructor of that course and their program chair or graduate advisor. The student must then petition the dean of the Graduate School for the desired credit and receive approval before registration. Credit will not be given for undergraduate courses taken to make up deficiencies in the student's preparation for a program of graduate studies, nor will credit ordinarily be given for language courses that are not part of the student's program of studies. Under no circumstances may a student receive credit toward completion of degree or residence requirements for courses undertaken to aid in the completion of language requirements. Scholarship students may not apply their scholarships toward the remission of tuition for undergraduate courses taken to remedy deficiencies. The completed Enrollment Card must be signed by the program chair before submission at registration. Students must reenroll in full-year courses at midyear. Students wishing to drop a full-year course at midyear must petition the dean of the Graduate School for permission, after receiving the written approval of the instructor of the course and the chair of their program. Students may not register at midyear for a full-year

course without the written approval of the instructor of the course and their program chair.

Enrollment Cards are filed no later than two weeks after the opening days of instruction (see Academic Calendar for specific date) and are considered to be final.

Auditing Courses

The privilege of auditing courses without fee is extended to all regularly enrolled graduate students except special students. Special students may audit courses by paying for them at the same rate as those taken for credit. No courses may be audited without the permission of the instructor. Auditors may not take examinations or expect evaluation from the instructor. No credit is given for an audited course.

Change of Program

Only under unusual circumstances are students allowed to drop courses after filing their Enrollment Cards. To do so, a Course Change Card is obtained from and returned to the Office of the University Registrar. Courses must be dropped no later than one week prior to the beginning of an examination period. Each course dropped is subject to a \$20 fee.

Registration in Terms of Time

Advanced students — those who have completed two full years of residence, either by graduate work at Brandeis or receiving credit for graduate work done elsewhere — may register in terms of time, subject to the signed approval of their program chair. Their Enrollment Cards must indicate that they are registering full-time or a specific fraction thereof (one-quarter, one-half or three-quarters).

Registration in terms of time is a device that helps to individualize programs of study and permits increased freedom for independent research for advanced graduate students. Registration in terms of time frees students to pursue a program of study that partially accepts or bypasses altogether the system of formal courses, although students registering in terms of time will usually register for an advanced research or dissertation course. Their time will be spent in such research and reading as will be most beneficial to their development as scholars.

Absence from Examinations

Students who are absent from a midyear or final examination without an accepted excuse will receive a failing grade for that examination. No students may be excused from such examination unless for emergency or medical reasons, nor may they be excused if they were able to notify the instructor in advance and failed to do so. Cases involving absence are referred to the chair of the program who will decide whether a make-up examination shall be allowed and will notify the Office of the University Registrar of the decision. The examination must be taken within six weeks of the opening of the next term.

Grades and Course Standards

Graduate students are expected to maintain records of distinction in all courses. Letter grades will be used in all courses in which grading is possible. In reading thesis or research courses, if a letter grade cannot be given at the end of each term or academic year, credit ("CR") or no credit ("NC") may be used.

"NC" and any letter grade below B-minus are unsatisfactory grades in the Graduate School. A course in which the student receives an unsatisfactory grade will not be counted toward graduate credit.

At the end of each academic year the Office of the University Registrar will issue to each student a report of grades and degree requirements satisfactorily completed.

Incompletes

A student who has not completed the research or written work for any course may receive an "EI" (incomplete) or a failing grade at the discretion of the course instructor. A student who receives an "EI" must satisfactorily complete the work of the course in which the incomplete was given in order to receive credit for the course and a letter grade. An incomplete, unless given by reason of the student failure to attend a final examination, must be made up no later than the end of the term following the term in which it was received. When failure to take a final examination has resulted in an "El," resolution of that "El" to a letter grade must occur within six weeks of the beginning of the next term. If a student requires additional time to settle an incomplete grade, he/she may petition the dean of the Graduate School for an extension of time, provided the petition is signed by the instructor of the course and

the program chair. Such a petition must be filed prior to the expiration of the deadline for making up an incomplete. An "El" that is not resolved within the stated time limits will automatically become a permanent incomplete ("XI").

Credit for Work Done Elsewhere

Craduate-level courses taken prior to matriculation at Brandeis University may not be counted toward fulfillment of the residence requirement for the Master of Arts degree, although a program may accept work taken elsewhere in partial fulfillment of specific course requirements for the degree. In that case, additional courses are designated to replace courses from which the student has been exempted.

A maximum of one term of residence credit for graduate-level courses taken prior to matriculation may be counted toward fulfillment of the residence requirements for the Master of Fine Arts degree.

Students admitted to Ph.D. programs may file an application to have graduate-level courses taken prior to matriculation counted toward fulfillment of residence requirements at this institution. A maximum of one year of residence credit may be granted.

Applicants for transfer credit will not necessarily be granted the credit requested. Each program reserves the right to require of any student work in excess of its minimum standards to assure thorough mastery of the area of study. In all cases, courses being transferred must carry a grade of "B" or better and must have been earned at an appropriately accredited institution.

After completing one term of residence at a full-time rate or the equivalent at a part-time rate, students eligible to apply for transfer credit may do so. Forms are obtained at the Graduate School office and submitted to the student's program for approval. The form is then forwarded to the dean of the Graduate School for final approval. The dean will advise the applicant of any action taken.

Credit for work at another institution taken concurrently with studies in the Graduate School must be approved for potential transfer credit by both the student's program and the dean of the Graduate School prior to registration for such courses. Such approval is granted only in unusual circumstances. Students who formally cross-register with Boston College, Boston University and/or Tufts University through the Consortium do not need prior approval from the dean's office.

Residence Requirements

Residence requirements for all graduate degrees are computed by determining the amount of registration for credit and the tuition charges. Part-time students and teaching assistants pursuing part-time programs of study for credit complete their residence requirements when their fractional programs (one-quarter, one-half, three-quarters) total the amount required of a full-time student.

Master of Arts

The minimum residence requirement for all students is one academic year on a full-time graduate credit program at the full tuition or the equivalent thereof in part-time study. Transfer credit may not normally be applied to residence requirements for the Master of Arts degree.

Master of Fine Arts

The minimum residence requirement for all students in music is three terms at a full-time rate, at the full tuition rate for each term, or the equivalent thereof in part-time study. Residence may be reduced by a maximum of one term with approved transfer credit.

The minimum residence requirement for acting and design students in theater arts is four terms at the full-time rate and two terms at the post-resident rate or the equivalent thereof in part-time study. The minimum residence for students in dramatic writing is four terms at the full tuition rate or the equivalent thereof in part-time study. Residence may be reduced by a maximum of one term with approved transfer credit.

Doctor of Philosophy

The minimum residence requirement for all students is two academic years on a full-time graduate credit program for each year, at the full tuition rate for each year, or the equivalent thereof in part-time study. A maximum of one year's approved transfer credit may be granted toward residence for the Ph.D. degree.

Full-Time Resident Students

A full-time student is one who devotes the entire time, during the course of the academic year, to a program of graduate work at Brandeis University.

A full-time program may include a combination of teaching and research assistance, work leading to the fulfillment of degree requirements, such as preparation for qualifying, comprehensive and final examinations, supervised reading and research or the writing of M.A. theses and Ph.D. dissertations, as well as regular course work.

A full-time resident student may take as many courses for credit in any term as are approved by the program chair, but no student may receive credit for, or be charged for, more than a full-time program in any term. Thus the minimum residence requirement for any degree may not be satisfied by an accelerated program of study or payment of more than the full-time tuition rate in any single academic year.

Ph.D. candidates and students for whom the M.A. and M.F.A. degrees are terminal degrees may continue as full-time students on completion of their residence requirements by registering at the post-residence fee rate.

Part-Time Resident Students

A part-time student is one who devotes less than the entire time to a program of graduate work at Brandeis University. Students may register for a credit program of one-quarter, one-half or three-quarters time

Students wishing to pursue part-time residence study leading to a graduate degree must explain in writing, at the time they seek admission, why full-time study is not possible. Students receiving financial aid from the University, who wish to change their status from full-time to part-time residency, must file with the Graduate School office an explanation of why full-time study is no longer possible.

Post-Resident Students

A graduate student who has completed residence requirements and who registers in order to utilize academic services or University facilities while completing degree requirements is a post-resident student.

Special Students

Properly qualified persons who wish to audit or to take courses without working for a degree will be admitted. Special students are normally not eligible for University loans, scholarships, fellowships, teaching or research assistantships nor will they be considered for resident counselorships. Special students who later wish to change their status to that of part-time or full-time students working for a degree must apply for admission as resident students. They must also file a special petition if they wish credit to be accepted for any courses taken at Brandeis as special students. Credit for such course work may be granted in exceptional cases.

Leave of Absence

Students may petition for leave of absence. The petition must have the approval of both the chair of the program and the dean of the Graduate School. Leaves of absence up to one year will normally be granted to students in good academic standing who present compelling personal reasons or need to do work off campus in connection with their graduate studies. Time spent on authorized leaves of absence will not be counted toward the maximum time permitted to complete degree requirements.

If for any reason a student must extend a leave of absence, he or she must request such extension in writing before the leave of absence expires. Failure to do so will result in being automatically dropped from the Graduate School roster.

Continuation

Graduate students who have completed residence requirements and are not registered during the period in which they are completing degree requirements are considered Continuation Students. A student in this category is not normally eligible for a leave of absence, except for reason of ill health or deferment of student loans.

Withdrawal

A student who wishes to withdraw from the Craduate School at any time before the end of the academic year must give immediate written notice to the program chair and to the dean of the Graduate School. Failure to comply may subject the student to dismissal, refusal of readmission, cancellation of the privilege of securing an official transcript and, in the case of a student withdrawing within 30 days of the beginning of classes, loss of eligibility for partial refund of tuition. Such a student must pay tuition for the full term. Permission to withdraw will not be granted if the student has not discharged all financial indebtedness to the University or has not made arrangements for subsequent payment to the satisfaction of the bursar's

Discipline and Student Judicial System

Exclusion, Dismissal or Expulsion

The University reserves the right to dismiss or exclude at any time any student whose character, conduct, academic standing or financial indebtedness it regards as undesirable. Neither the University nor any of its Trustees or officers shall be under any liability whatsoever for its disciplinary action, exclusion or dismissal.

The University also reserves the right to revoke, cancel or reduce at any time any financial or honorific award made to any graduate student, for character, conduct, academic standing or financial indebtedness regarded by the University as undesirable; neither the University nor any of its Trustees or officers shall be under any liability whatsoever for canceling, revoking or reducing any award.

Student Judicial System

The University establishes standards of student behavior and reserves the right to suspend or permanently dismiss students whose conduct warrants such action. The University will give due notice and, if requested, a hearing before the appropriate body. The Student Judicial System is administered by the offices of student life and residence life, Standards, policies and procedures are published in the graduate Student Handbook.

Annual Notice to Students Brandeis University Records Policy

Annually, Brandeis University informs students of the Family Educational Rights and Privacy Act of 1974, as amended. This act, with which the institution intends to comply fully, was designed to protect the privacy of educational records, establish the right of students to inspect and review their educational records and provide guidelines for the correction of inaccurate or misleading data through informal and formal hearings.

Students also have the right to file complaints with The Family Educational Rights and Privacy Act Office (FERPA) concerning alleged failures by the institution to comply with the Act.

University policy explains in detail the procedures used by the institution for compliance with the provisions of the Act. Copies of the policy, which includes a directory of records listing all education records maintained on students by the institution, can be found in the offices of the University registrar, the dean of the college, the Graduate School and The Heller School. The policy is also on reserve in the Farber Library, Questions concerning the Family Educational Rights and Privacy Act may be referred to the Office of the University Registrar.

Public Notice Designating Directory Information

Brandeis University hereby designates the following categories of student information as public or "Directory Information." Such information may be disclosed by the institution for any purpose, at its discretion.

Category I Name, identification number, local address and telephone number, date of birth, class (i.e., year of graduate study).

Category II
Dates of attendance and field of
concentration at Brandeis, previous
institution(s) attended and major field of
study, awards and honors, degree(s)
conferred and date(s) conferred.

Category III
Past and present participation in officially recognized sports and activities, physical factors (height, weight, etc.).

Currently enrolled students may withhold disclosure of any category of information under the Family Educational Rights and Privacy Act of 1974, as amended. To withhold disclosure, written notification must be received by the Office of the University Registrar prior to the fall term registration deadline at Brandeis University. Forms requesting the withholding of such information are available at the Office of the University Registrar.

Students who withhold disclosure of Category I information will not appear in the student directory published annually by the University. Brandeis University assumes that failure on the part of any student specifically to request the withholding of information indicates individual approval for disclosure.

Fees and Expenses

Payment of ruition and other fees are due on August 1 for the fall semester and January 2 for the spring semester. A student who has not paid such fees by the day of registration will be refused the privilege of registration.

A student who defaults in the payment of indebtedness to the University shall be subject to suspension, dismissal and refusal of a transfer of credits or issuance of a transcript.

Such indebtedness includes, but is not limited to, delinquency of a borrower in repaying a loan administered by the student loan office and the inability of that office to collect such a loan because the borrower has discharged the indebtedness through bankruptcy proceedings. If the student is a degree candidate, his or her name will be stricken from the rolls.

A student who has been suspended or dismissed for nonpayment of indebtedness to the University may not be reinstated until such indebtedness is paid in full.

Application Fee: \$50. Payable by all applicants for admission at the time the application for admission is submitted. It is not refundable. Checks and money orders should be made payable to Brandeis University. No application for admission will be processed until this fee is paid. This fee is not required of Brandeis graduates.

Tuition Fee: The fees for tuition in the Graduate School for 1991-92 are as follows:

Full-time resident students: \$16,085 per year, or \$8,042.50 per term.

Special Students and part-time resident students: \$2,020 per course, per term.

In view of the constantly increasing costs of education, students may expect one or more tuition increase during their academic careers

Post-Residence Fee: Students who have completed their residence requirements and wish to continue in residence to utilize any academic service or University facility must register at the usual tuition rates. Graduate students may petition the dean of the Graduate School for a reduction of the post-residence fee to \$975. Students who continue to utilize any academic service or University facility after having completed residence but have failed to register, are subject to disciplinary action by the dean of the Graduate School. A student who is eligible for registration on the post-residence basis may file an Enrollment Card for full-time study, in terms of courses or in terms of time or any combination thereof, provided the

program chair approves of the program of study as being a full-time program and signs the Enrollment Card.

Late Registration Fee: \$20. Payable for failure to complete registration at the time announced by the Office of the University Registrar.

Orientation Fee: \$25. A one-time fee payable by students entering for the first time.

Change-of-Program Fee: \$20. Payable by any graduate student who wishes to drop or add a course after deadline for filing Study Cards

Incomplete Records Fee: \$30. Payable for failure to complete administrative requirements by date(s) specified in the Academic Calendar and/or catalog (e.g., late filing of Health Examination Report, failure to register, etc.)

Continuation Fee: \$100. Payable annually by graduate students who have completed residence requirements and do not wish to use University facilities. Students in this category are preparing for the completion of degree requirements. They are normally not eligible for leaves of absence or student loan deferments.

Master's Fee: \$75. A candidate for the M.A. or the M.F.A. who is subject to the Continuation Fee and earns a degree in any term following one in which he or she has not been in residence, shall pay the Master's Fee. The fee is chargeable only once.

Final Doctoral Fee: \$300. This fee covers all costs for the year in which the Ph.D. degree will be conferred, including the costs for the microfilm publication of the abstract of the dissertation in Dissertation of the abstract of the dissertation in Dissertation Abstracts, issuance of a Library of Congress number and appropriate library cards, binding two copies of the dissertation, one for use in the University Libraries and one Xerox-printed copy in book form for the author. The Final Doctoral Fee covers the rental expenses for academic robes for graduation and the cost of the diploma. Students who have paid the Continuation Fee in the final year may deduct that fee from the Final Doctoral Fee.

NOTE: All candidates for the Ph.D. degree must pay the \$300 Final Doctoral Fee prior to the receipt of their degrees.

Reinstatement Fee: \$250. Payable by a student who, after withdrawal, suspension or dismissal, has been reinstated with the consent of the dean of the Graduate School.

Transcript Fee: \$5. Students, former students and graduates should request official transcripts of their records from the Office of the University Registrar, Kutz Hall. The charge is \$5 for each copy issued after the first one, which is free. Requests by mail for transcripts must be accompanied by a check in the correct amount payable to Brandeis University. Transcripts will be issued only to those students whose University financial records are in order.

Diploma Fee: \$20. Payable by candidates for the M.A. and M.F.A. degrees.

Student Health Services Fee: \$280. Entitles the graduate student to use of the Health Services.

Student Insurance Fee: \$480. Payment of the Insurance Fee entitles the graduate student to participate in the benefits of the Health Insurance Program. The fee is payable prior to registration and no portion is refundable. Student insurance is optional for Special Students.

Student-Spouse Insurance Fee: \$875. This fee provides 12-month coverage for student and spouse in the Health Insurance Program. The fee is payable prior to registration and no portion is refundable.

Dependent Insurance Coverage: \$1,200. Although the health services offered at Stoneman Infirmary are not extended to dependents of students, an optional family health insurance plan is available to married students with families. Special Students are not eligible for this plan.

Parking Fee: \$35-\$90. Payable annually at fall registration for privilege of parking an automobile on campus. Fee varies with assigned parking area.

Financial Assistance

Refunds

The only fee that may be refundable, in part, is the tuition fee. No refund of the tuition fee will be made because of illness, absence or dismissal during the academic year. If a student withdraws, he or she may petition the dean of the Graduate School for a partial refund of tuition in accordance with the following:

1. Tuition Withdrawal:

Before the opening day of instruction: 100% of the term's tuition.

On or before the second Friday following the opening day of instruction: 75% of the term's tuition.

On or before the fifth Friday following the opening day of instruction: 50% of the term's tuition.

After the fifth Friday following the opening day of instruction: no refund.

2. Scholarship

2. Scholarship student who withdraws, the student's account will be credited with the same proportion of the term scholarship as charged for tuition: 75% if the student leaves on or before the second Friday, 50% on or before the fifth Friday and no refund thereafter.

To help students whose records indicate scholarly promise, the University makes available special scholarships and fellowships and a variety of awards and work opportunities. No student is eligible for federal aid without filing with the Gradnate School office a standard financial aid form (GAPSFAS). All scholarships and fellowships are granted for one academic year; therefore, a registered student who holds a scholarship or fellowship must apply amnually for a renewal by filing the GAPSFAS or the Application for Federal Student Aid provided by the Graduate School.

All awards are granted and accepted with the understanding that they may be revoked or reduced at any time for undesirable conduct or poor academic standing.

Ordinarily, no student may hold a fellowship, scholarship or teaching assistantship for more than two years of study for the M.A. degree, more than three years of study for the M.F.A. degree or more than four years of study for the Ph.D. degree. Ordinarily, no student may receive a scholarship, fellowship or teaching assistantship after one year of study at the post-residence fee. Priority in making awards is given to full-time students.

Students receiving financial aid from Brandeis University, whether in the form of a scholarship, fellowship or teaching/research assistantship are required to maintain a superior level of academic progress.

All students contemplating outside employment that would require a significant proportion of their time should discuss their intentions with their program advisor.

Scholarships

A scholarship is an award on grounds of scholarly ability and financial need that will be used exclusively for remission of tuition fees. Full scholarships and partial scholarships are available. Scholarship students are liable for all but tuition charges.

Fellowships

A fellowship is an academic award of honor to outstanding students of good character to help them in furthering advanced study and research. The amount of the stipend depends on the quality of the student's record and performance; need is also considered in most cases. A fellowship recipient must pay tuition fees unless the award includes a scholarship in an amount covering tuition. No services are required of students for fellowship or scholarship awards.

Teaching Assistantships

Teaching assistants are resident students in the Graduate School who do part-time teaching as part of their training and are paid. The University has established teaching assistantships to enable distinguished graduate students to gain teaching experience while continuing their studies. Teaching assistants are eligible for other awards, including scholarships and fellowships.

Teaching assistantship appointments are made on the authority of the President of the University by the dean of the Graduate School who, in turn, acts on the recommendation of a student's program chair. Appointments are made for periods of one year or one term and are renewable. All awards of teaching assistantships to incoming students are conditional upon an interview with a University representative, prior to registration. The University reserves the right to terminate any appointment at any time for due cause. Conduct, character or academic standing that is regarded as undesirable may constitute cause, but the University need not assign any reason for the termination of an appointment at any time. All teaching assistantship appointments are made and accepted with this understanding, and neither the University nor any of its Trustees or officers shall be under any liability whatsoever for the summary termination of a teaching assistantship.

Student Services

Research Assistantships

Research assistantships are available in several programs, especially the science areas. First-year graduate students are not normally eligible for appointment. Application should be made to the chair of the graduate program.

Loans

Stafford Loans (formerly the Guaranteed Student Loan Program or CSL). A student may be eligible for a Stafford Loan if he or she meets the following requirements: (1) is accepted for enrollment or is attending Brandeis University and is in good standing as determined by the University; (2) is carrying at least one-half the normal full-time work load; (3) is a citizen or national of the United States or is in the United States for other than a temporary purpose; (4) can demonstrate need. An eligible student may be able to borrow up to \$7,500 in any academic year at an 8 percent interest rate and does not have to begin repayment until six months after he/she ceases to be at least a half-time student. The total amount a student may borrow under the Stafford Loan Program. including both undergraduate and graduate school loans, may not exceed \$54,750. Special Students, regardless of whether they are full- or part-time, are ineligible for Stafford Loans.

Information and applications for this program are available from banks, savings and loan associations and credit unions.

Students who plan to borrow through one of the participating sources must have on file at the Craduate School office a current Graduate and Professional Student Financial Aid Service form (GAPSFAS). Forms may be obtained at the Graduate School office or from the Financial Aid Service, P.O. Box 23900, Oakland, CA 94623-0900.

Office of Student Employment

The Office of Student Employment assists students who need and desire part-time work. Students seeking part-time work should register with the Office of Student Employment. New students are not assigned part-time work prior to arrival on campus.

Housing

Brandeis University has a limited number of apartment units available for single and married graduate students. All apartments are within easy walking distance of the campus. These include efficiency, onetwo-, three- and five-bedroom furnished apartments. Single students may rent a space in an apartment and request that the Graduate Housing office assign a roommate. The one-bedroom apartments are particularly designed to allow use as two separate bedrooms with a common kitchen and bathroom. Graduate housing applications are usually sent from the Office of Residence Life on the first of May and are due to the Office of Residence Life by the middle of June.

In addition, the Office of Residence Life maintains listings of available housing in the area, a list of realtors who may be helpful in a search for housing and descriptions and information about nearby neighborhoods and towns.

Dining Facilities and Services

Brandeis University Dining Services offers nonkosher and kosher dining at Sherman Dining Hall. Also located in Sherman is the Stein which offers pub-style dining in a restaurant atmosphere. In Usdan Student Center, in addition to the cafeteria, there is a recently expanded Boulevard which contains a convenience store and snackery.

Graduate students may sign meal contracts for any one of the three meal plans offered. These are: 21 meals per week, any 14 meals per week + 2000 points and any 10 meals per week. Graduate students may also purchase points. The initial purchase must be a minimum of \$50. Additional points may be purchased in increments of \$25. Purchases of \$300 and more will be discounted 5 percent at the time of purchase. These points may be used as cash in all Dining Services locations, except the Faculty Club. Points may not be used to purchase alcohol in the Stein. The advantage of points over cash is that points are discounted 5 percent at the cash register. Any student wishing to sign a meal contract and/or purchase points must bring his or her l.D. card to the Meal Contract Office in Kutz Hall.

Health Services

Because health and medical care are an integral part of the University experience, the University Health Services provides a program of comprehensive medical and emotional care. An optional Health Services Fee entitles students to medical services available at Mailman House without additional charge during the academic year. This fee does not pay for off-campus medical consultations, dental care, medications, laboratory tests, drugs, X-rays, reusable supplies or admission to the University's hospital, Stoneham Infirmary, and students are responsible for these charges.

In addition, each student is required to have personal health insurance. The student may elect to participate in the Student Health Insurance Plan offered through the University or substitute membership in a comparable plan.

International students are required to have full United States or Canadian health insurance for themselves, their spouses and their children regardless of a national health insurance in their home country. They may enroll in the Student Health Insurance Program or arrange alternate insurance with a company in the United States.

Both domestic and international students must provide documentation of health insurance coverage to University Health Services at the start of each academic year. Those who do not provide this information will be automatically enrolled in the Student Health Service Insurance Plan.

Except for limited day-care facilities, the Health Services and the use of the Stoneham Infirmary are available to students only during the period in which the University is in regular academic session.

Students planning to matriculate in the Graduate School must submit a Health Examination Report completed by the family or personal physician prior to registration. In addition to information about previous health and details of the physical examination, state law requires that all students present evidence of immunization against tetanus, polio, measles, mumps and rubella. Since students may not register until the requirements have been satisfied, it is strongly recommended that the Health Examination Report he submitted by July 1.

The Student Health Insurance Plan is designed to defray expenses of those situations that are beyond the scope of the Health Services; for example, laboratory and N-ray examinations, as well as hospitalization for illnesses or accidents of

a more serious nature. The plan extends for a full calendar year commencing with the first day of the academic year.

A detailed brochure of the services offered by the University Health Services as well as an outline of the details of the plan is mailed to students annually. Students and parents are urged to read this brochure carefully and keep it for reference. This brochure includes a statement of patients' rights in Health Services.

Whereas situations not covered within the Health Services or by the Insurance Plan are infrequent, an awareness of these possibilities will lessen misunderstanding and disappointment.

In such instances, students and their parents are responsible for expenses that are not covered by the University's health program or its associated insurance policy. Similarly, students and their parents are responsible for expenses that are not covered by alternative insurance programs substituted for the Brandeis University Student Health Insurance Plan.

Psychological Counseling Center — Mailman House

The services of the Psychological Counseling Center, a part of the University Health Services, are available to students who enroll in the University Health Services plan. At the Center, a professionally trained staff provides a range of counseling and psychological services designed to enhance personal development of students and assist those who are experiencing personal or emotional problems. Individual counseling and psychotherapy are available both to undergraduate and graduate students; group therapy is also available on a limited basis. Students may make an appointment to see a counselor by calling the Counseling Center office on the second floor of Mailman House at (617) 736-3730.

Office of International Programs

The staff of the Office of International Programs serves as counselors and advisors to international citizens at Brandeis, including graduate and undergraduate students and international faculty. It aids the students and faculty in fulfilling the legal procedures required by the United States Immigration and Naturalization Service, i.e., obtaining extensions of stay, special permits to work and the proper documents for leaving and reentering the country. The office coordinates the Brandeis host family program and provides assistance and referral services throughout the year.

The office also provides counseling services for Brandeis undergraduates and graduate students who seek to enrich their education through a period of study abroad. It also maintains a resource library of materials on available programs. The office provides information and assistance in obtaining international study grants available through Fulbright, Rhodes, D.A.A.D., Marshall and other scholarship and fellowship programs, including the Sachar International Scholarships for Brandeis students.

English as a Second Language Program

International graduate students whose native language is not English are required to take the Diagnostic English Proficiency Examinations and have an oral interview approximately one week before the beginning of classes. Prospective teaching assistants may be asked to give an oral presentation as well. On the basis of the examinations and the interview, a student may be required to enroll in the English as a Second Language Program.

The English as a Second Language Program provides tutorial and/or small class instruction throughout the academic year. The aims of the program are twofold: (1) to support all international graduate students in their efforts to achieve the high standards of oral and written English proficiency necessary for their success as students and (2) to support international teaching assistants in their efforts to develop the strong oral communications skills essential to their effectiveness as teachers.

Assignment to classes and/or a tutorial is dependent upon the student's skill in English as determined by the results of the test administered on admission. For students who have been awarded a teaching assistantship in their first year of study or expect to teach in a future year and whose English does not meet the University's minimum standard of proficiency, these courses are mandatory. For all others, they are recommended but not required.

No course credit toward the advanced degree is earned for these courses.

Academic Schools, Research Centers and Institutes

The Center for Complex Systems

The Center for Complex Systems has been formed for the purpose of studying large, complex systems, with the brain and intelligence as the system of greatest interest. The Center is comprised of faculty members who specialize in artificial intelligence, cognitive science, linguistics, neurosciences, experimental psychology and artifical neural networks, among others The Center is therefore an interdisciplinary group with the ability to perform scientific analysis of the brain from the neuronal level to the cognitive and use these analyses to facilitate development of sophisticated computational systems and modeling. The Center aims to increase knowledge within each of its individual component disciplines, as well as foster interactions among the components, giving rise to new scientific initiatives. Students interested in the study of complex systems should concentrate in one of these component disciplines: biochemistry, biology, chemistry, computer science, linguistics and cognitive science, neuroscience, physics or psychology.

Crown School of Graduate Studies in American Civilization

The School's primary objective is to support gifted students in their work toward a doctorate in the History of American Civilization. Crown Fellowships are granted occasionally to special students on the Brandeis campus from both the United States and abroad who are drawn from important facets of public life including the media and the foreign service.

Danielsen School of Philosophy, Ethics and Religious Thought

The School includes the Department of Philosophy, which places traditional emphasis on logic, epistemology, metaphysics, value theory and the history of philosophy. The advancement of philosophical thought in the context of contemporary issues is encouraged through scholarly and interdisciplinary approaches. One of several endowed professorships in the School is the Albert V. Danielsen Chair in Christian Thought.

Fierman School of Chemistry

The school of chemistry offers diverse and advanced activities in inorganic, organic and physical chemistry on both graduate and undergraduate levels as well as participating in interdisciplinary programs with physics, biochemistry and biology. The School has been aided by grants from the National Institutes of Health, National Science Foundation, Department of Energy, Research Corporation and Petroleum Research Foundation. The research activities of the department have resulted in more than 1,400 papers published in leading professional journals.

Fisher School of Physics

The school of physics encompasses both theoretical and experimental physics on the graduate and undergraduate levels as well as a new program in engineering physics and provides a setting for lectures and colloquia. Grants from agencies including the National Science Foundation and the Department of Energy support research programs in the Fisher School.

Gordon Public Policy Center

The Gordon Public Policy Center is the nation's first interdisciplinary, multi-university center for the study of public policy. Dedicated in 1987, the Center was founded by the James Gordon Foundation of Chicago. It is the research home of political scientists, economists, sociologists, lawyers and historians from Brandeis, MIT, Boston College, Boston University, Harvard and Wellesley College. The Center's mission is to analyze domestic public policy from the perspective of a number of academic disciplines and improve the implementations of public programs through research and evaluation, publications and direct practical service to those in government. It seeks to bridge the world of ideas and the world of action.

Kutz School of Biology

The School encompasses the University's undergraduate and graduate biology programs. Special attention is given to modern aspects of molecular biology applied to problems in comparative biology and genetics. Undergraduates are encouraged to engage in original research and independent study. A major portion of the governmental, industrial and private research grants awarded to Brandeis is devoted to varied projects in biology and health services.

Lown School of Near Eastern and Judaic Studies

The School encompasses an intensive teaching and research program in all the main areas of Judaic studies, the Ancient Near East and the Modern Middle East. In addition, the Lown School has programs that prepare students for Jewish communal service and programs of research in areas of direct concern to the American Jewish community.

The Department of Near Eastern and Judaic Studies is the primary teaching and research unit in the Lown School. In this department the University has assembled an unusual array of distinguished scholars who offer an extremely broad curriculum. A second unit in the Lown School is the Benjamin S. Hornstein Program in Jewish Communal Service which provides graduate education for students interested in professional careers in Jewish communal service and Jewish education. The School also includes the Maurice and Marilyn Cohen Center for Modern Jewish Studies which is devoted to the study of contemporary American Jewish life. The Cohen Center currently engages in research and teaching in such areas as Jewish demographics, identity, the family, education and political behavior and antisemitism.

Benjamin Michtom School in Computer Science

The Benjamin Michtom School in Computer Science encompasses a recently expanded, state-of-the-art, computer science program incorporating undergraduate and graduate instruction and internationally recognized research programs in the areas of computer science theory, languages, systems and artificial intelligence. Brandeis has just established the Center for Complex Systems for research in the computational, cognitive and neurosciences. Plans are well under way for the design of a building to house the Center. The computer science component of the Center will place special emphasis on artificial intelligence and parallel computation.

Rosenstiel Basic Medical Sciences Research Center

The Center is one of the nation's leading centers for research programs in the basic medical sciences embracing work in biochemistry, biology, microbiology, biophysics, immunology, protein crystallography, chemistry and physics. Staff members are jointly appointed to the Brandeis faculty basic science

departments. The Center invites participation of distinguished scholars and medical scientists, offers hospitality to younger researchers at the graduate and fellowship levels and sponsors symposia and colloquia.

The Rosenstiel Basic Medical Sciences Research Center is well provided with sophisticated scientific equipment and facilities and through cooperative programming with other departments has broadened the scope of basic medical science research offerings at Brandeis. Grants from such agencies as the National Science Foundation, National Institutes of Health and American Cancer Society, among others, support research programs in the Rosenstiel Center.

The Center sponsors the annual presentation of the Lewis S. Rosenstiel Award to recognize distinguished work in basic medical research.

Swig School of Political Science

The School offers a wide range of courses in American government, international relations, theory, methodology and comparative politics.

Several endowed academic chairs in the School include the Harry S. Truman Chair in American Civilization. the Earl Warren Chair in American Constitutional Studies, the Christian A. Herter Chair in International Relations and the Adlai E. Stevenson Chair in International Politics.

The Tauber Institute for the Study of European Jewry

The Tauber Institute for the Study of European Jewry seeks to study the history and culture of European Jewry in the modern period. It has a special interest in studying the causes, nature and consequences of the European Jewish catastrophe and seeks to explore them within the context of modern European diplomatic, intellectual, political and social history. The Tauber Institute for the Study of European Jewry is organized on a multidisciplinary basis with the participation of scholars in history. Judaic studies, political science, sociology, comparative literature and other disciplines. The Institute is engaged primarily in research. Its government includes a distinguished Board of Overseers, which advises the director and works closely with the University. Members of the Institute include fellows, faculty advisors, associates and graduate students.

Areas of Study and Courses — 1991-1992

All courses meet for three hours a week unless the course description indicates otherwise. The presence of "a" or "b" in the course number indicates a term course; "c" indicates a full-year course given in either the fall or spring term; "d" indicates a full-year course; the use of "c" after a course number indicates that the course is given as a term course but meets throughout the year.

The University reserves the right to make any changes in the offerings without prior notice. Faculty and course listings are accurate as of June 1, 1991.

American Civilization

See History of American Civilization

Anthropology

Objectives

The graduate program in anthropology, leading to the degree of Doctor of Philosophy, is designed to produce scholars who will broaden our knowledge of culture and society. Admission is limited to students whose primary interests lie within the fields of social and cultural anthropology (including linguistic anthropology) or archaeology. Most graduates of the program accept appointments at colleges and universities, although a number take employment in government, private institutions or foundations. Intensive training for independent research is stressed, with particular emphasis on comparative studies and fieldwork.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. Students need not have an undergraduate major in anthropology or sociology-anthropology. If admitted, however, the student without previous training in anthropology may be required to take additional courses, as determined by the program, to complete his/her residence requirements. Students should have a reading knowledge of one foreign language.

Faculty

Professor Robert C. Hunt Chair: Social anthropology. Comparative methods. Irrigation. Mesoamerica.

Professor David Kaplan: Economics. Method and theory. Peasant cultures. Middle America. Associate Professor Judith T. Irvine: Ethnography of communication. Linguistics. Social stratification. Africa.

Associate Professor David E. Jacobson: Social anthropology. Medical anthropology. Families and households. United States. Africa. Associate Professor Richard Parmentier: Semiotic anthropology. Kinship. Historical anthropology. Communications and media. Oceania. Contemporary

United States.

Associate Professor Benson Saler: Comparative religion and folk philosophies. Psychological anthropology. Mesoamerica. South America. Pastoral peoples.

Associate Professor Robert N. Zeitlin: Sociocultural evolution. Prehistoric exchange. Pre-state societies. Archaeological method and theory. Mesoamerica. Assistant Professor Sally McBrearty: Paleoanthropology. Physical anthropology. Hominid evolution. East Africa. South Asia.

Assistant Professor David W. Murray: Cognitive and linguistic anthropology. Symbolic anthropology. Theory and history of anthropology. Language and culture. North American Indians. Canada. Adjunct Assistant Professor Charles A. Ziegler: Industrial and applied anthropology.

Research Associates

George N. Appell: Social anthropology. Southeast Asia.

Pedro Carrasco: Mesoamerican ethnology and ethnohistory. Clemency Coggins: Prehistoric art and archaeology of Mesoamerica, lower Central America and Peru.

R. David Drucker: Mesoamerica, especially calendrics and astronomy. Cornelia Ann Kammerer: Kinship. Religion. Gender. Southeast Asia.

Emily H. Moss: Old World archaeology. Lithic analysis. Wilma Wetterstrom: Archaeology. Cultural ecology. Ethnobotany and putrition

Degree Requirements

Program of Study.

Ordinarily students are admitted for the doctoral program only. Students may, however, petition to be awarded the M.A. degree if they have fulfilled the residence requirement set by the Graduate School and have met the following additional requirements: satisfactory completion of eight term courses, including three or more core courses from among those required for the Ph.D., as described below; demonstration of reading proficiency in a foreign language examination; program approval determined by the faculty at the first-year evaluation; submission of an acceptable master's thesis. If a student is continuing toward the Ph.D., the Specialist Essay may be substituted for the master's thesis.

Doctor of Philosophy

Program of Study.

Flexibility of curriculum allows the student to organize a program of study around his or her anthropological interests. At the same time, the program is structured so that students achieve a broad familiarity with other aspects of the discipline through seven core courses. During their two years of residence, unless exempted by virtue of previous graduate training, students must complete the following six core courses: ANTH 102a An Anthropological Introduction to Language ANTH 115b Biocultural Adaptation, ANTH 123a Directions and Issues in Archaeology, ANTH 200a History of Anthropological Thought, ANTH 203a Contemporary Issues in Anthropological Theory and ANTH 206a Comparative Social Institutions. The seventh core course may be either ANTH 102b Social and Cultural Aspects of Linguistic Analysis or ANTH 186a Mathematics and Computers in Archaeological Data Analysis. In individual cases, the program may approve a substitute course in quantitative methods. Through course work and outside reading, students are expected to attain a high degree of scholarly competence in at least one culture area and one topical field. Brandeis University is in a consortium with Boston College, Boston University and Tufts University Anthropology students wishing to cross-register for a course at any of these institutions must have prior approval of the program for the course to be counted toward degree requirements.

A temporary faculty advisor is assigned to each incoming student; by the end of the second term of study, the student is expected to recruit two members of the program to serve as his/her permanent advisory committee. The advisor, or advisory committee, is responsible, through regular meetings and informal consultation, for guiding the student's selection of suitable courses, helping to formulate a dissertation research project and supervising his/her programs.

Students are evaluated at the end of the first full year of study to determine their eligibility to continue in the program. As a result of this evaluation, the program may permit the student to either complete the master's degree requirements or continue course work toward the Ph.D. degree.

During the residence years, the student demonstrates reading proficiency in an approved foreign language. Although the faculty may permit a student to delay fulfilling this requirement until a later stage in the program, in all cases the examination part of the requirement must be met before a student may be admitted to candidacy for the Ph.D. degree.

At the completion of residence, students must submit a brief statement (300-500 words) of their tentative research plans to the graduate student advisor.

During the year following completion of residence and course requirements (normally the third year), the student takes the general examination which tests for overall mastery of the discipline. After passing the general examination, he/she writes a Specialist Essay which should focus on theoretical and/or topical issues relevant to the proposed dissertation research. This essay must demonstrate the student's capacity for independent research of high quality. The foreign language requirement must be completed during this period. This segment of

the program can be completed in one year

although some students will need more time.

Qualifying Procedure.

A reading knowledge of at least one foreign language must be demonstrated by examination and writing a research paper (such as a course paper) or dissertation in which sources in the chosen language contribute to the research. The examination part of this requirement must be passed before the student may be admitted to candidacy for the Ph.D. degree.	Dissertation and Defense.	The department will recommend to the dean of the Graduate School that a Ph.D. be awarded to the candidate upon formal acceptance of a dissertation, which is successfully defended in a Final Oral Examination. Details of the regulations for certifying approval of the dissertation and for the Final Oral Examination are found in earlier pages of this catalog.
A student is admitted to candidacy for the Ph.D. upon satisfactory completion of 1) 16 term courses, including the seven core courses, 2) the General Examination, 3) the Specialist Essay and 4) a reading examination in a foreign language.		
action		ŧ
A general introduction to anthropological perspectives on language. Topics include the organization of language as a communicative system, language in human evolution, linguistic approaches to cultural meaning and worldyiew and historical perspectives on	Anthropology 110a. Introduction to Human Evolution	A study of the fossil evidence for human evolution. Lectures and labs focus on the biological and geological processes that create the fossil record and how it is interpreted to reconstruct the past.
language.		Usually offered in even years.
Usually offered every year.		Ms. McBrearty
Ms. Irvine	A J 1 411	
Advanced topics in anthropological linguistics: linguistic fieldwork and the analysis of unfamiliar languages, linguistic variation and social structure and current issues in semantics and pragmatics.	Anthropology 111a. Introduction to Primate Studies	An introduction to the study of nonhuman primates paying special attention to studies of primates in their natural habitat. Topics focus on the relationships of elements of an animal's feeding, social/maintenance and locomotor behavior to selected aspects of its environment
Prerequisite: ANTH 102a or LING 100a.		Usually offered in odd years.
Usually offered in even years.		Staff
Ms. Irvine	1 1 110	
A comparative study of social and cultural aspects of language. Topics include the following: How do social groups differ in their use of language? How does a person's speech contribute to the impression he/she makes on other people? How is conversation organized and to what purpose?	Anthropology 112a. Population and Poverty in the Third World	It is misleading to blame the poverty of the Third World nations on "overpopulation." Nevertheless, explosive population growth hinders the solution of other problems. Most population programs have not been very successful. Household decisions affecting reproduction and fertility are discussed from an anthropological perspective.
Usually offered every four years.		Usually offered in even years.
Mr. Murray		Staff
Myth and ritual studied as two interlocking modes of cultural symbolism. Various theoretical approaches to myth are evaluated by looking at creation myths and political myths. Contrasts between performative, processual and spatial models of ritual analysis are explored. Usually offered every other year.		
	language must be demonstrated by examination and writing a research paper (such as a course paper) or dissertation in which sources in the chosen language contribute to the research. The examination part of this requirement must be passed before the student may be admitted to candidacy for the Ph.D. degree. A student is admitted to candidacy for the Ph.D. upon satisfactory completion of 1) 16 term courses, including the seven core courses, 2) the General Examination, 3) the Specialist Essay and 4) a reading examination in a foreign language. Interest of the General Examination, 3, 10 the Specialist Essay and 4) a reading examination in a foreign language. Interest of the General Examination, 3, 10 the Specialist Essay and 4) a reading examination in a foreign language. Interest of the General Examination, 3, 10 the Specialist Essay and 4) a reading examination in a foreign language. Interest of language as a communicative system, language in human evolution, linguistic approaches to cultural meaning and worldview and historical perspectives on language. Usually offered every year. Ms. Irvine Advanced topics in anthropological linguistics: linguistic fieldwork and the analysis of unfamiliar languages, linguistic variation and social structure and current issues in semantics and pragmatics. Prerequisite: ANTH 102a or LING 100a. Usually offered in even years. Ms. Irvine A comparative study of social and cultural aspects of language? How does a person's speech contribute to the impression he/she makes on other people? How is conversation organized and to what purpose? Usually offered every four years. Mr. Murray Myth and ritual studied as two interlocking modes of cultural symbolism. Various theoretical approaches to myth are evaluated by looking at creation myths and political myths. Contrasts between performative, processual and spatial models of ritual analysis are explored.	language must be demonstrated by examination and writing a research paper (such as a course paper) or dissertation in which sources in the chosen language contribute to the research. The examination part of this requirement must be passed before the student may be admitted to candidacy for the Ph.D. degree. A student is admitted to candidacy for the Ph.D. upon satisfactory completion of 1) 16 term courses, including the seven core courses, 2) the General Examination, 3) the Specialist Essay and 4) a reading examination in a foreign language. Topics include the organization of language as a communicative system, language in human evolution, linguistic approaches to cultural meaning and worldview and historical perspectives on language. Usually offered every year. Ms. Irvine Advanced topics in anthropological linguistics: linguistic fieldwork and the analysis of unfamiliar languages, linguistic variation and social structure and current issues in semantics and pragmatics. Prerequisite: ANTH 102a or LING 100a. Usually offered in even years. Ms. Irvine A comparative study of social and cultural aspects of language? How does a person's speech contribute to the impression he/she makes on other people? How is conversation organized and to what purpose? Usually offered every four years. Mr. Murray Myth and ritual studied as two interlocking modes of cultural symbolism. Various theoretical approaches to myth are evaluated by looking at creation myths and political myths. Contrasts between performative, processual and spatial models of ritual analysis are explored.

Mr. Parmentier

21	Anthropology		
Anthropology 113a. Human Variation	An introduction to human biological variation. Differences between individuals and populations within human species in biological characteristics (body build, blood groups, skin color, etc.) are analyzed using an adaptive approach. Usually offered every three years. Staff	Anthropology 119a. Conquest and Colonialism in Native Latin America	An often overlooked topic in Latin American studies is an examination of the impact that Spanish and Portuguese colonialism has had on the inhabitants of the Americas. Within a hundred years after the Conquest, the once dense Indian populations had been reduced by as much as 90 percent and great imperial states like those of the Aztecs and Incas were transformed into a subjugated peasantry. We trace the historical development of post-Conquest Indian society, from the policies and cultural institutions of Iberian
Anthropology 114b. Meaning in Anthropology: Interpretation	We concern ourselves with the question of meaning as defined by the major traditions in the philosophy of language and ethnolinguistics.		colonialism through the complex ethnic and economic interactions of different native groups within the modern nation states of Latin America.
and Performance	Usually offered in even years.		Usually offered every third year.
	Mr. Murray		Staff
Anthropology 115b. Biocultural Adaptation	An advanced course dealing with human adaptation with particular emphasis on the interaction of elements of the biological and cultural adaptive system in human societies.	Anthropology 120b. Anthropology of Law	Law is studied comparatively in relation to its social and cultural context. Western law is placed in an historical perspective and compared with "law ways" in different nonindustrialized societies.
	Usually offered in odd years.		Usually offered every year.
	Ms. McBrearty		Staff
Anthropology 116a. Human Osteology	An introduction to human skeletal anatomy from both an evolutionary and a functional perspective. Students learn to identify and interpret the bones of the human skeleton. They are introduced to specific techniques for aging, sexing and recognizing pathologies on skeletal material as well as to more general principles of anatomical structure and function.	Anthropology 123a. Directions and Issues in Archaeology	An examination of concepts involved in the archaeological study of prehistoric societies. Selected readings are discussed as illustrations of major theoretical and methodological issues Usually offered in even years. Mr. Zeitlin
	Enrollment limited to 15 students.	4 1 1 494	C CLAC 420 f 1
	Usually offered in even years.	Anthropology 124a. Archaeology of	See CLAS 132a for description.
	Ms. McBrearty	the Near East	Usually offered every year. Staff
Anthropology 117a.	See CLAS 152a for description.		
The Archaeology of Cyprus	Usually offered every third year.	Anthropology 124b. Topics in Near	See CLAS 132b for description.
o. cyprus	Staff	Eastern Archaeology	Usually offered every year.
	Stan	Archaeology	Staff
Anthropology 118b. History of Anthropological Theory	Examines the intellectual precursors of the discipline of anthropology and then traces the development of the major modern schools. How was "mankind" as an intellectual object created? In predominantly lecture format, the course is concerned with the social context of the beginning of anthropology and identifies the seminal thinkers and peremual issues they addressed. These issues are pursued into their	Anthropology 125b. Investigations in an Unfamiliar Language	Using a native speaker of an unfamiliar language (such as Turkish or Amharic) as a source of data, the class investigates the structure of the language and compares it with the structure of English and other familiar languages. Usually offered in even years.
	modern forms in the American, British and French schools.		Ms. Irvine

Mr. Murray

Usually offered every fourth year.

22	Anthropology		
Anthropology 126b. Semiotic Anthropology	Historical survey of development of theories of signs and symbols, including comparison of Peircean and Saussurcan foundations of modern semiotics; the structure of cultural codes and the possibility of cross-cultural	Anthropology 134a. Muslim Cultures	Provides an introduction to the anthropological study of cultures of the Middle East, with emphasis on Muslim societies.
	typologies.		Usually offered in even years.
	Usually offered in even years.		Staff
	Mr. Parmentier		
Anthropology 127a. Irrigation and Social Evolution	Irrigation has played a very large part in the evolution and history of civilization. Examines theory concerning the role of irrigation in social change and concentrates on state formation, conquest of the frontier and economic development.	Anthropology 136b. Magic, Witchcraft and Religion	An introduction to various attempts to characterize magic, witchcraft and religion and to theorize about their roles in human life. What is usually meant by magic and wh do people sometimes engage in practices tha we label magical? Usually offered every year.
	Usually offered in even years.		Mr. Saler
	Mr. Hunt		
Anthropology 130a. The Archaeology of Syria-Palestine	See CLAS 153a for description. Usnally offered every fourth year. Staff	Anthropology 137a. Modes of Thought	An exploration of worldviews among literate and nouliterate peoples with reference to the roles of social structure, language, literacy and experience in the development of ideas about reality and with regard to criteria suggested for evaluating the "rationality" of belief statements and behavior.
Anthropology 130b.	See CLAS 112b for description.		Usually offered every year.
The Archaeology of Israel	Usually offered in even years.		Mr. Saler
	Staff	Anthropology 141b. North American Indians	The native peoples of North America from the time of European contact to the present day legal and political confrontations. Attention
Anthropology 131a. The Archaeology of Anatolia	See CLAS 154a for description. Usually offered every third year.	indians	given to representative languages, economies worldviews and religious beliefs, form of social organization and distinctive types of man-environment transactions.
	Staff		Usually offered every fourth year.
Anthropology 132a. Origins of African Cultures	African prehistory from the earliest cultures of the lower pleistocene to the beginnings of historic states.		Mr. Murray
	Usually offered in odd years.	Anthropology 143a. The Inca and	Uses archaeological and ethnohistorical data to explore the historical development of these
	Ms. McBrearty	Their Ancestors: Ancient	pre-Columbian cultures of the Andes and neighboring regions of South America.
		Civilizations of South America	Usually offered every fourth year.
Anthropology 199a	Explores the veriety and richness of		Staff
Anthropology 133a. Fradition and the Contemporary Experience in Sub-Saharan Africa	Explores the variety and richness of indigenous African social and cultural forms, such as the organization of the family; indigenous political systems; rank and slavery; traditional economies; ideas about magic, witchcraft and religion and the arts.	Anthropology 145a. Seminar in Mesoamerican Archaeology and Ethnohistory	The topic varies from year to year. Usually offered every fourth year. Mr. Zeitlin
	Usually offered every third year.	Lamonistory	vii. Zettiiii
	Will be offered Spring 1991.		
	Ms. Irvine	Anthropology 147b. The Rise of Mesoamerican Civilization	Considers ways that environment, population growth, social structure, religion, ideology ar other factors may have been related to the achievements of the Olmec, Teotihuacan, Maya, Zapotec and Aztec cultures.
			Usually offered every third year.

23	Anthropology		
Anthropology 148a. Rise, Function and Fall of Early Civilizations	Regularities in the ways large-scale nonmodern societies work — and fail to work. Ethnographic and historical data and leading anthropological theories are reviewed, as well as archaeological evidence from Mesoamerica, Mesopotamia, China, Egypt and Peru.	Anthropology 158a. Urban Anthropology	Comparative study of strategies used in coping with the complexity of urban life. Attention is given to analyzing and evaluating the theories, methods and data anthropologists and others use in their studies of urban social organization.
	Usually offered every fourth year.		Summer Session I
	Staff		M, T, W, Th 11-1
			Usually offered in even years.
Anthropology 151a. The Archaeology	See CLAS 151a for description.		Mr. Jacobson
of Mesopotamia	Usually offered in odd years.		
	Staff	Anthropology 160b. Mind, Self and Emotion in	Examines the self and its emotional states and explores cross-cultural answers to questions such as: To what extent are emotions mental experiences, capable of being learned or
Selected Topics in Comparative Religion: Seminal	omparative Freud, Emile Durkheim and Max Weber.	affected by culture? Is emotional experience controllable and deployable to advantage in strategies of interaction?	
Works in the Study of Religion	Usually offered in even years.		Usually offered in even years.
oracy or mengion	Mr. Saler		Mr. Murray
Anthropology 155b. Psychological Anthropology	An examination of the relationship between sociocultural systems and individual psychological processes with a critical evaluation of selected theories and studies bearing on this problem. Usually offered every fourth year.	Anthropology 161b. Culture and Cognition	Explores the relationship between cognitive processes and cultural systems, cultural differences involving people's perception, classification processes, memory or modes of problem solving and their effect on the course of cognitive development.
	Last offered Spring 1991.		Usually offered every year.
	Mr. Saler		Mr. Murray
Anthropology 156a. Power and Violence: The Anthropology of Political Systems	Political orders are established and maintained by varying combinations of overt violence and the more subtle workings of ideas. Examines the relationship of coercion and consensus and forms of resistance, in both historical and contemporary settings.	Anthropology 163b. Economic Anthropology: Production and Distribution	All humans must equip and organize themselves to produce and distribute the necessities and luxuries of life. Samples different ways of producing and distributing food, tools, crafts and services. Most attention is paid to "primitive" economies.
	Usually offered in odd years.		Usually offered in odd years.
	Staff		Mr. Hunt
Anthropology 157a. Families and Households	Describes and analyzes several family types and households in contemporary American life, interpreting them in their cultural contexts and comparing them with similar arrangements in other cultures.	Anthropology 164b. Corporate Cultures	Examines the structure and internal dynamics of the modern corporation with special emphasis on corporate culture, i.e., the system of company-specific beliefs, values and norms that underlies work-related behavior of members.
	Summer Session I		Usually offered in even years.
	M, T, W, Th 9-11		Mr. Ziegler
	Usually offered in odd years.		

Mr. Jacobson

24	Anthropology		
Anthropology 165b. Evolution of Political Economy	Examines the structural features of political economy in a developmental framework, beginning with hunting and gathering societies through horticultural societies to chiefdoms to agrarian states to industrial states. The primary focus is on a comparative analysis of preindustrial states and those	Anthropology 186b. Mathematics and Computers in Archaeological Data Analysis II	A continuation of Anthropology 186a. Usually offered in odd years. Staff
	factors which historically have prompted or hindered their transition to industrialism. Usually offered every year.	Anthropology 188a. Materials in Ancient Societies	A seminar and laboratory course meeting at MIT. Usually offered every year.
Anthropology 166a. The Nature of	Mr. Kaplan Deals with various theories of human nature and the evidence for such theories. Explores		Signature of Brandeis coordinator, Mr. Zeitlin, required. Staff (at MIT)
Human Nature	the way in which theories of the nature of man have figured in interpretations of culture. Usually offered every year. Mr. Saler	Anthropology 188b. Materials in Ancient Societies	See ANTH 188a for course description and special notes. Usually offered every year.
Anthropology 171a. Cross-Cultural Inquiry in Social Science	Relativism is the fundamental problem of social science and all cross-system investigation must confront it. Insider-outsider, emic/etic, equivalence and other forms are considered. The major		Signature of Brandeis coordinator, Mr. Zeitlin, required. Staff (at MIT)
Anthropology 175a.	Usually offered in even years. Mr. Hunt An analysis of representative classics and	Anthropology 200a. History of Anthropological Thought	An historical examination of major ideas and perennial problems in social thought that have led to the development of modern theo and method in anthropology. The principal schools of thought and significant figures associated with them in American, British ar
Reading Ethnography	contemporary works in the ethnographic literature. The course's aim is to help students better understand the ethnographic accounts upon which much of social and cultural anthropology is based. Usually offered in even years.		Continental traditions. Usually offered every year. Mr. Murray
Anthropology 181b. Problems of Ancient Statecraft	Mr. Jacobson An advanced seminar on characteristic problems in the creation and maintenance of ancient states and empires, and the means by	Anthropology 203a. Contemporary Issues in Anthropological Theory	An intensive examination of the major paradigms of contemporary anthropological theory. Concentration on recent debates abo fundamental distinctions such as explanation/understanding, comparison/particularism and material/symbolic analysis.
	which these problems were dealt with. Usually offered in odd years. Staff		Usually offered in odd years. Mr. Kaplan
Anthropology 186a. Mathematics and Computers in Archaeological Data Analysis I	Topics include basic descriptive statistics, logic of statistical reasoning, research design and sampling, use of statistical packages, an introduction to multivariate methods and uses of these approaches for archaeological interpretation and theory building.	Anthropology 206a. Comparative Social Institutions	Introduces students to key anthropological conceptions of social institutions and their ro in cross-cultural comparison. Included are examples such as status and role, household and family, lineage and descent group, network and alliance and class and stratification.
	Usually offered every third year.		Usually offered in even years.

20	This operagi		
Anthropology 222-284. Readings and		238a and b. Readings and Research in	
Research Courses		Urban	Mr. Jacobson
22a and b.		Anthropology	vii. Jacobson
Readings and Research on the		239a and b. Readings and	
World Before		Research in	
Civilization	Mr. Zeitlin	North American Indians	Mr. Murray
25a and b.			,
Readings and Research in		241a and b. Readings and	
Cultural Analysis		Research in New	
	Mr. Parmentier	World Ethnohistory	Staff
26a and b.			Oun
Readings and		252a and b. Readings and	
Research in Archaeology	Mr. Zeitlin	Research in	
		Anthropology of	Mo Indian
27a and b. Readings and		Art	Ms. Irvine
Research in		253a and b.	
Linguistic	Ms. Irvine	Readings and Research in	
Anthropology	Maj. II ville	Economic	
228a. Advanced		Anthropology	Mr. Kaplan
Aavancea Readings in		254a and b.	
Method and	M- Vanlan	Readings and	
Theory	Mr. Kaplan	Research in Southeast Asian	
228b.		Ethnography	Mr. Appell
Advanced Readings in		256a and b.	
Method and	W V 1 17	Readings and	
Theory	Messrs. Kaplan and Zeitlin	Research in Religion	Mr. Saler
229a and b.			-
Guided Comparative and		257a and b. Readings and	
Historical	V	Research in	
Research	Mr. Hunt	Families and Households	Mr. Jacobson
231a and b.			
Readings in Cognitive Culture		259b. Readings and	
o Burning Chinaire	Mr. Saler	Research in	
232a.		Conceptions of Personhood	Mr. Murray
Readings in	W II		
Development	Mr. Hunt	260a. Readings and	
232b.		Research in	
Readings in Housing	Mr. Hunt	Cognition and Education	Mr. Murray
	, A. A. A. CARL		
234b. Readings and		261b. Readings and	
Research in		Research in the	
Anthropology of	Staff	Symbolic Anthropology of	
Law	Stall	Japan	Mr. Murray
235a and b. Readings and		262a and b.	
Research in		Readings and	
Latin American	Mr. Hent	Research in the	
Cultures	Mr. Hunt	Social Study of Science	Mr. Murray
237a and b. Readings and		263a.	
Research in		Problems in	
African Cultures	Ms. Irvine	Ethnicity and Identity	Mr. Murray
			VIE. MUITTAV

26	Anthropology		
283a and b. Readings and Research in Fieldwork 284a and b. Readings and	Mr. Jackson	Anthropology 304a and b. Readings and Research in Anthropological Field Methods	Staff
Research in Archaeological Methods	Mr. Zeitlin	Anthropology 305d. Anthropology Colloquium	Staff
Anthropology 300d. Seminar in Anthropological Fieldwork	Usually offered every year. Staff	Anthropology ±02d. Dissertation Research	Independent research for the Ph.D. degree Specific sections for individual faculty members as requested.
Anthropology 302d. Summer Research Training	Fieldwork for three months during the summer under the supervision of a member of the staff.		Staff
	Staff		

Biochemistry

Objectives

The graduate program in biochemistry leading to the degree of Doctor of Philosophy is designed to equip students with a broad understanding of the chemical and molecular events involved in biological processes and to train them to carry out independent original research. Major emphasis in this program is placed upon experimental research work. However, students are required to complete formal course work in advanced biochemistry, molecular biology and physical biochemistry Additional courses and seminars are available in a wide range of subjects including neurobiology, immunology, structural biochemistry, membrane biology and genetics. Students are encouraged to choose advanced courses and seminars according to their particular interests. Doctoral research topics are chosen in areas under investigation by the faculty; these include problems in macromolecular structure and function, enzyme function and regulation, gene regulation, membrane transport and receptor function, molecular pharmacology mechanisms of cell motility, microbial metabolism and the biochemistry of cellular electrical excitability. A theme running through most of this research is the relationship of biochemical functions to underlying molecular structures and mechanisms.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of the catalog, apply here. Applicants for admission to the biochemistry program are also required to take the Graduate Record Examination. It is strongly suggested that the applicant take one of the advanced sections (preferably chemistry or biology) of this examination. The student's undergraduate curriculum should include some fundamental courses in biology and chemistry.

Faculty

Professor Pieter Wensink Chair (Rosenstiel Center): Molecular biology. Regulation of gene expression during the development of higher organisms. Protein-mucleic acid interactions.

Professor Robert H. Abeles: Mechanism of enzyme action. Design of highly specific enzyme inactivators. Design of inhibitors with potential pharmacological significance. Mechanism of drug action. Professor Gerald D. Fasman: Conformation of biological macromolecules. Protein-DNA interactions. Protein models, synthesis and conformational studies. Glycoprotein models. Conformation of membrane proteins and receptors.

Professor Thomas C. Hollocher, Jr.: Role and mechanism of action of oxidation-reduction enzymes. Mechanism, enzymology and pathway of nitrogen in denitrification and nitrification

Professor William P. Jeneks: Mechanisms of reactions catalyzed by enzymes, coenzymes and chemical catalysts. Mechanisms. catalysis and equilibria of reactions of "energy-rich" compounds of importance in biochemistry and chemistry. Mechanisms of conversion of chemical energy into osmotic and mechanical work.

Professor Lawrence Levine: Immunochemistry. Antibodies as analytical reagents for measuring pharmacologically important molecules. Mechanisms of arachidonic acid metabolism by cells in culture.

Professor Irwin B. Levitan (Director, Center for Complex Systems): Neurobiology. Neurobiochemistry. Regulation of neuronal membrane properties. Professor
John M.
Lowenstein:
Role of
phospholipids in
hormone action.
Regulation of
metabolic pathways.
Regulation and
function of the
purine nucleotide
cycle; regulation of
adenosine
production in heart.

Professor
Susan Lowey
(Rosenstiel Center):
Structure and
function of
myofibrillar proteins
and their relation to
the muscle cell.
Techniques include
physical chemistry,
protein chemistry,
lihorescence and
electron microscopy.

Professor Christopher Miller: Structure and function of ion channel proteins. Membrane transport and mechanisms of electrical excitation.

Professor Gregory Petsko (Rosenstiel Center): X-ray crystallographic analysis of protein structure and enzyme mechanisms.

Professor Alfred G. Redfield (Rosenstiel Center): Magnetic resonance in biopolymers. Physical biochemistry. Macromolecular structure. Professor Serge N. Timasheff: Physical chemistry of proteins. Stabilization of structure in solution. Self-assembling systems. Ligand-mediated interactions. Macromolecular properties of

biological polymers.

Professor Helen Van Vunakis: Interaction of biologically active compounds with specific antibodies and natural receptors. Nicotine metabolism and physiological effects. Associate Professor William T. Murakami: Biochemistry of virus infection. Metabolism of virus-infected cells. Purification and characterization of polyoma virus.

Associate Professor Dagmar Ringe (Rosenstiel Center): Structures of enzymes and enzyme-substrate complexes. X-ray crystallography.

Assistant Professor T. Christian Boles: Structure of supercoiled DNA. Mechanisms of DNA recombination. Regulation and functions of DNA supercoiling in vivo. Assistant Professor Jeff Gelles:
Mechanisms of mechanoenzymes.
Stochastic processes in single enzyme molecules. Light microscopy as a tool to study enzyme mechanisms.

Assistant Professor Daniel D. Oprian: Structure-function studies of visual pigments and other cell surface receptors.

Degree Requirements

Doctor of Philosophy

Program of Study.

Each doctoral candidate must satisfactorily complete the following fundamental courses: advanced biochemistry, advanced molecular biology, physical biochemistry and biochemical research problems, four biochemistry seminars and one advanced course from outside the program.

After the required courses are completed, the faculty will evaluate each student's performance to decide whether the student should continue working towards the Ph.D. degree or the Master of Arts degree.

Financial Support.

Graduate students receive finaucial support (tuition and stipend) throughout their participation in the graduate program. This support is provided by a combination of University funds, training grants and individual research grants.

Teaching.

As a part of the graduate training program, students are required to participate as teaching assistants for two terms. No laboratory teaching is required.

Language Requirements. There is no foreign language requirement for the Ph.D. degree.

Qualifying Examinations. An oral qualifying examination must be taken generally at the beginning of the second year. In this examination, the student will be asked to defend or refute two propositions. One proposition will be assigned in an area of research outside the student's immediate area of specialization, and one will be an original proposition put forth by the student for a research problem in his or her area of interest (this is not necessarily a problem upon which he or she will carry out research).

In addition, the student must demonstrate general knowledge of hiochemistry in a series of three area examinations: physical biochemistry and macromolecules, metabolism and enzymology and molecular biology. Students are expected to have taken three examinations by the end of the third year; two of these must be taken by the end of the second year. This general knowledge outside the student's own field of specialization must be demonstrated to the satisfaction of an advisory committee of four program faculty members.

Admission to Candidacy.

In their third year, students will present to a committee of four members of the program a summary of their research accomplished to date, including the most significant experimental data and detailed plans for the completion of a research project. The committee will recommend whether the research project should be continued as a partial fulfillment of the requirements for the Doctor of Philosophy degree. After completion of the research report and the three area examinations at a level satisfactory for the Ph.D. degree, the student will be admitted to candidacy.

Dissertation and Defense. A dissertation will be required that summarizes the results of an original investigation of an approved subject and demonstrates the competence of the candidate in independent research. This dissertation will be defended in a Final Oral Examination.

Courses of Instruction

Biochemistry 100a. Introduction to Biochemistry	Chemistry, reaction and metabolism of biologically important compounds. Formation and utilization of "energy-rich" compounds. Introduction to enzyme mechanisms. An attempt is made to interrelate and compare basic biochemical and chemical processes. Metabolic regulation. Prerequisites: Chemistry 25a and b. Usually offered every year.	Biochemistry 104b. Introduction to Physical Biochemistry	Discussion of physical methods, molecular interactions, solvent effects, principles of folding, structural and conformation analyses by various spectroscopic and X-ray techniques. Usually offered every year. Messrs. Miller and Timasheff
	Section 1, Fall: Mr. Abeles and Mr. Jencks Section 2, Fall: Mr. Lowenstein Section 3, Fall: Ms. Lowey	Biochemistry 105b. (BIOL 105b) Molecular Biology	See BIOL 105b for course description. Usually offered every year.
Biochemistry 100b. Introduction to Biochemistry	Usually offered every year. Mr. Petsko and Ms. Ringe	Biochemistry 140a. Introductory Neuroscience for Graduate Students	Messrs. Roshbash, Sen and Haber Introduces the basic principles of neurobiology. Topics include ion channels and their role in generating resting and action potentials; basics of synaptic physiology and
Biochemistry 101a. Advanced Biochemistry 1	A discussion of enzyme reactions including energetics, kinetics and reaction mechanisms. Metabolism of carbohydrates, lipids, amino acids, nucleic acids, vitamins and coenzymes, hormones and inorganic substances. Coupled enzyme reactions, such as oxidative phosphorylation, and the synthesis of macromolecules, such as glycogen, protein and the nucleic acids. Regulated enzymes and regulation of metabolism.		pharmacology; biosynthesis and release of neurotransmitters and hormones; interactions of neurotransmitters and hormones with receptors and basic principles of neurodevelopment, plasticity and learning. Usually offered every year. Staff
	Usually offered every year. Messrs. Abeles and Jencks	Biochemistry 144b. (BIOL 144b) The Neurobiology of Memory	See BIOL 144b for course description. Usually offered in odd years. Mr. Lisman
Biochemistry 101b. Advanced Biochemistry II	A continuation of BCHM 101a. Usually offered every year. Messrs. Gelles and Oprian	Biochemistry 200a and b. Biochemistry Techniques	Prerequisite: BCHM 101. May be taken concurrently. Usually offered every year.
Biochemistry 102b. (BIOL 102b) Structural Molecular Biology	See BIOL 102b for description. Usually offered in odd years. Mr. DeRosier	Biochemistry 202b. Chemistry of Enzyme-Catalyzed Reactions	Mr. Celles Deals with reaction mechanisms of catalysis in aqueous solution, some of which are relevant to enzymic catalysis.
Biochemistry 103a. Advanced Molecular Biology	The fundamental principles of molecular biology are stressed with respect to nucleic acid biosynthesis, structure and involvement in physiology. In addition, the control of gene expression is outlined. Usually offered every year. Mr. Wensink		Usually offered in even years. Mr. Jeneks
		Biochemistry 235b. (CHEM 235b) Special Topics in Organic Chemistry	See CHEM 235b for description Mr. Pochapski, Ms. Hertzfeld and Mr. Redfield
		Biochemistry 301b. Summer Laboratory Rotation	Admission by consent of graduate advisor. Usually offered every year. Staff

Biochemistry 225b.
Actin-based
Motility and
Muscle
Contraction
Ms. Lowey

Mr. Gelles

Biochemistry 224a.

Microtubule~ based Mechanoenzymes

> Journal Club, Colloquia and Research Clubs

Staff

In addition to the formal courses announced above, all graduate students are encouraged to participate in the department's Journal Club and colloquia. The Journal Club is an informal meeting of the students, staff and postdoctoral fellows, at which recent publications are discussed. Colloquia are general meetings of the department in which both speakers from the department and guest speakers present their current investigations. Research clubs are organized by various research groups of the department.

Biology

Objectives

The graduate program in biology, leading to the Degree of Doctor of Philosophy, is designed to equip each student with the theoretical foundations and research experience needed to become an independent and original investigator of basic biological phenomena. Preparation is achieved through the combination of a flexible curriculum of courses tailored for each student's specific needs; a set of laboratory rotations that acquaints each entering student with current research techniques and permits exploration of possible research areas; and a series of proseminars and journal clubs that keeps students abreast of significant research findings and develops confidence with oral arguments and presentations. First-year students participate in all three aspects of our graduate program and are thus quickly integrated into the biological research community at Brandeis.

Thesis research leading to the Ph.D. degree is carried out under the personal direction of a faculty member. A complete list of faculty research interests and recent publications is available from the Biology Program. Potential applicants are urged to obtain and consult this brochure. As a general orientation, the following areas of research are among those represented in the program: molecular biology of the regulation of gene expression, especially during development; chromosome structure and chromosomal rearrangements; mechanisms of recombination; developmental genetics; behavior genetics and neural development; biophysics of single nerve cells; learning and memory; integration of neural function; immunogenetics; immune cell differentiation and development; molecular biology of the immune system; regulation of muscle contraction; photobiology; molecular and cell architecture; organization of subcellular structures; structure and function of membrane proteins.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. The student's undergraduate record should ordinarily include courses equivalent to those required of undergraduates concentrating in biology at this institution. Students who are deficient in some of these subjects, but whose records are otherwise superior, may make up their deficiencies while they are enrolled as graduate students. In exceptional cases, students may be excused from some of these requirements. Students with serious deficiencies must, however, expect to add additional time to their graduate program in order to satisfy the deficiencies.

Applicants should take the Graduate Record Examination.

Since the summer months provide an important opportunity for uninterrupted laboratory work, the biology program provides 12-month stipend support for all full-time students.

Faculty

Professor Attila O. Klein Chair: Plant physiology. Environmental studies.

Professor Carolyn Cohen (Rosenstiel Center):Structural molecular biology. Professor David J. DeRosier (Rosenstiel Center): Structural studies of actin, actincontaining cytosk eletal assemblies and bacterial flagella.

Professor Chandler Fulton: Cell differentiation and selective gene expression in eucaryotic cells. Morphogenesis of cell shape and assembly of cell organelles, especially flagella.

Professor Martin Gibbs: Photosynthesis and plant physiology. Professor James E. Haber (Rosenstiel Center): Genetics and molecular biology of veast mechanisms of meiotic and mitotic recombination; mating-type switching; healing of broken chromosomes; structure, function and regulation of plasma membrane ATPase.

Professor Jeffrey C. Hall: Neurogenetics and molecular neurobiology of higher behaviors in Drosophila. Professor Kenneth C. Hayes (Director, Foster Biomedical Research Laboratory): Comparative nutritional pathophysiology in man and animals. Lipoprotein metabolism and atherogenesis, cholclithiasis. Professor Hugh Huxley (Director, Rosenstiel Center): Structure and function of muscle.

Professor John E. Lisman: Mechanisms of phototransduction; molecular mechanism of memory storage.

Professor Evc E. Marder: Neurotransmitter modulation of neural circuits. Professor Alfred Nisonoff (Rosenstiel Center):Immunoche mistry. Genetic control of the immune response. Regulation of IgE.

Professor Michael Rosbash: RNA processing and molecular neurobiology. Professor Jerome A. Schiff: Plant biochemistry and physiology. Photocontrol of intracellular development. Sulphur metabolism.

Professor Andrew G. Szent-Gyorgyi: Regulation of muscle contraction at the molecular level. Professor Kalpana P. White: Developmental neurogenetics.

Associate Professor Joan L. Press (Rosenstiel Center): Developmental immunology and immunogenetics.

Associate Professor Lawrence J. Wangh: Molecular controls of DNA replication in *Xenopus* eggs. Adjunct Associate Professor Judith E. Tsipis: Virology.

Assistant Professor Susan T. Lovett: Genetics and molecular biology of bacteria and yeast. Genetic and biochemical analysis of recombination. Assistant Professor Ranjan Sen: Molecular immunology. Transcription factors.

Assistant Professor Neil Simister (Rosenstiel Center): Molecular immunology.

Assistant Professor Donald Straus: Development and gene regulation.

Degree Requirements

Doctor of Philosophy

Program of Study.

Students will be expected to obtain a knowledge of the principles and techniques of the areas represented in the program, i.e., genetics, developmental biology, molecular biology, neurobiology, immunology and cell biology. The background a student is expected to have in these areas will be covered in courses given by the program. Entering students will do research rotations in at least three different laboratories. The student will be expected also to have additional background in his/her area of specialization as well as experience in seminar and research courses to be designated.

Each student will choose his/her specific field of interest and will apply for a permanent advisor to be agreed upon by the program at the end of the first year. The advisor will assist the student in planning a well-balanced program in his/her specific field of interest. In addition, the advisor will ordinarily serve as the chair of the student's dissertation examining committee.

At least one year of teaching experience (or equivalent) is required of all degree candidates.

Language Requirement. There is no foreign language requirement for the Ph.D. degree.

Qualifying Examination. The qualifying examination consists of research two propositions in which the student identifies an important and interesting research problem and then proposes the experiments to attack it. These are written and defended orally. Part One is taken in the middle of the second year. Part Two constitutes a thesis proposal and is taken in the third year.

Admission to Candidacy.

Dissertation and Defense. To be admitted to candidacy, the student must have (a) completed all required course work, (b) passed the qualifying examination and (c) been accepted by a graduate advisor.

Each student will conduct an original investigation. With the approval of the student's advisor, however, research courses may be elected at any time. After submission of the dissertation, the candidate will be expected to present the principal results of his or her work and its significance during an examination in defense of the dissertation. A public seminar to the University community is also required.

Examines a number of key questions concerning the molecular basis of a range of essential cellular mechanisms and analyzes in detail the technical and theoretical advances that have made possible some of the crucial experiments on which our current knowledge is based.

Usually offered in even years.

Mr. Huxley

in Cell and

Molecular Biology

Usually offered every year.

Ms. Press

Biology 127a. Biostatistics Course content includes properties of random variables and several types of statistical inference — t-test, analyses of variance, correlation, linear and multiple regression and analysis of covariance and goodness of fit.

Usually offered in even years.

Staff

34	Biology		
Biology 140b. Introductory Neuroscience	Basic principles of neurobiology. Topics include ion channels and their role in generating resting and action potentials, basics of synaptic physiology and pharmacology, locomotion and visual processing and learning, among others. Usually offered every year. Ms. Marder	Biology 146a or b. Behavioral Genetics	Genetic bases of behaviors from simple reflexes and taxes to higher-order forms such as learning, personality traits, affective disorders, etc. After focusing on fundamenta concepts, the issue of "genetic determinism cintelligence" will be considered. Usually offered every fourth year. Last offered Spring 1990.
Biology 141a or b.	Topics include structure-function studies of		Staff
Molecular Neurobiology	proteins that are key to neuronal function, control mechanisms that underlie brain-specific gene expression and genetic-molecular approaches to understanding specific brain processes.	Biology 147a. Neurogenetics	Development and function of the nervous system and responses of excitable cells, studied in neurological and behavioral mutants. Characterization and manipulation of genes, defined by these mutations and
	Usually offered in even years.		using molecular biological tools. Organisms: microbes, roundworms, fruit flies and
	Mr. Rosbash		mammals. Neurobiological areas: embryonic neural development, nerve cell differentiation and pattern formation, membrane
Biology 143a. Developmental Neurobiology	Mechanisms used in the formation of the nervous system will be discussed. Topics include determination of the neuronal precursors, pattern formation in the nervous system, neuronal differentiation and		excitability, responses to visual and chemica stimuli, biological rhythms and reproductive behavior. Usually offered every third year.
	mechanisms responsible for neural specificity.		Last offered Spring 1991.
	Usually offered every fourth year.		Mr. Hall
	Last offered Fall 1990.		
	Ms. White	Biology 161b. Developmental Genetics	The course will consider the use of classical genetics, cytogenetics and molecular genetic in the analysis of developmental problems.
Biology 144b. The Neurobiology of Memory	Topics include definition of the types of memory, genetic and pharmacological perturbations of memory and neural network approaches to memory. The principal focus will be the cellular and molecular basis of memory. Anatomical, biochemical and physiological work on long-term potentiation in the hippocampus will be extensively discussed.	CHERCS	Developmental processes such as oogenesis, embryogenesis and gene amplification will bused as framework for discussion of such genetic techniques as gyandromorph mapping, somatic recombination, cytoplasm and cellular transplantation, in situ hybridization, somatic cell recombination, e Readings will be assigned from the literature Usually offered every fourth year.
	Usually offered in even years.		Mr. Hall
	Mr. Lisman		
Biology 145b. Integrative Neuroscience	How the nervous system processes information and generates behavior. Topics include generation of rhythmic behaviors in invertebrates and vertebrates, structure and function of the olfactory system, somatosensory correx, auditory and visual processing, among others.	Biology 175b. Advanced Immunology	A survey of recent advances in molecular immunology. Topics include the nature and specificity of the T cell receptor, mechanism of B cell stimulation and genetic mechanism in the generation of diversity of antibody molecules. Usually offered in odd years.
	Usually offered every third year.		Mr. Nisonoff
	Last offered Spring 1991.		
	Mr. Lisman and Mr. Abbott	Biology 177b. Molecular Immunology	This course will cover studies of the immun- system at the molecular levels with emphasi on work presently being done in the field. T format of the course will be student analysis and discussion of papers in the current

Usually offered in odd years.
Mr. Sen

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35	Biology		
Biology 200a. Proseminar	Usually offered every year.	Research Courses	
	Mr. Haber	D: 1 404.1	
Biology 300a and b.	Primarily for the first-year student with the purpose of introducing him/her to biological	Biology 401d. Photobiology and Plant Physiology	Mr. Schiff
Biological Research	research and to the work in progress in the laboratories of a number of faculty members. In consultation with the graduate advisor, the student plans a sequence of such tenures, each comprising 12 weeks or more, and then carries out experimental investigations under the guidance of the faculty members involved.	Biology 402d. Photobiochemistry and Plant Metabolism	Mr. Gibbs
	Offered every year. Staff	Biology 403d. Immunochemistry: Genetic Control of	
	Stan	the Immune Response	
Biology 301b.	Admission by consent of graduate advisor.	•	Mr. Nisonoff
Summer Laboratory	Offered every year.	Biology 404d.	
Rotation	Staff	Developmental Neurobiology	Ms. White
Biology 305d. Topics in Molecular	Offered every year. Staff	Biology 405d. Cell	
Genetics and Development	Stan	Differentiation and Morphogenesis	Mr. Fulton
Biology 306d.	Offered every year.		
Fopics in Neurobiology	Staff	Biology 406d. Neurophysiology	Ms. Marder
Biology 307d. Topics in	Offered every year.	Biology 407d. Structural	M. G.I.
Immunology	Staff	Biochemistry	Ms. Cohen
Biology 308d.	Offered every year.	Biology 408d.	
Topics in Plant Physiology, Biochemistry and	Staff	Behavioral Genetics	Mr. Hall
Metabolism		Biology 409d. Biophysics of Visual	
Biology 309d. Motility Journal Club	Offered every year. Staff	Transduction Transduction	Mr. Lisman
		Biology 410d. Plant	
Biology 310d. Structural Biology Journal Club	Offered every year. Staff	Development Development	Mr. Klein
		Biology 411d.	Ma Wangh
Biology 350d. Graduate Student Research Seminar	Offered every year. Staff	Gene Control	Mr. Wangh
		Biology 412d. Structural Molecular Biology	Mr. DeRosier
		Biology 413d. General Physiology	Mr. Szent-Gyorgyi

36	Biology		
Biology 414d. Gene Organization Eukaryotes	Mr. Rosbash	Biology 1 21d. Molecular Immunology	Mr. Sen
Biology 415d. Biochemistry and Genetics of Differentiation	Mr. Haber	Biology 422d. Molecular Biology. Genetics and Biochemistry of <i>Drosophila</i> . Learning and	
Biology 416d. Immunology	Mr. Simister	Memory	Staff
Biology 417d. Muscle Physiology	Mr. Huxley	Biology 423d. Mechanisms of Recombination	Ms. Lovett
Biology 418d. Developmental Immunology	Ms. Press		
Biology 419d. Development	Mr. Straus		
Biology 420d. Nutritional Patho-physiology	Mr. Hayes		

Biophysics

Objectives

The interdepartmental graduate program in biophysics, leading to the degree of Doctor of Philosophy, is designed to provide a broad background in the physics and chemistry of living processes and to develop the students' capacity for independent research. The program offers opportunity for study and research in biophysical chemistry, structural biology, protein crystallography, neuroscience and photobiology. Applicants are expected to have strong backgrounds in physical science with undergraduate concentrations in biology, physics or engineering.

Admission

The general requirements for admission to the Graduate School are given in an earlier section of this catalog. Applications should include, in addition to letters of reference, a personal statement giving reasons for choosing biophysics and indicating areas of interest. Applicants are required to take the Graduate Record Examination and are encouraged to visit Brandeis for interviews, if possible.

Faculty Advisory Committee

Professor Dagmar Ringe (Chemistry and Biochemistry), Chair

Professor Carolyn Cohen (Biology) On sabbatical Fall 1991 Professor Donald Caspar (Physics)

Professor Judith Herzfeld (Chemistry)

Professor John E. Lisman (Biology) Professor Christopher Miller (Biochemistry)

Professor

Alfred G. Redfield (Physics and Biochemistry) On sabbatical Fall 1991 The faculty of the Biophysics Program is comprised of members of the biochemistry, biology, chemistry and physics departments. About 20 faculty members participate in this graduate program.

Degree Requirements

Doctor of Philosophy

Program of Study.

Since biophysics is a very broad field and students may have widely different backgrounds and goals, the course of study is flexible. During the first year, students take BIOP 300, a course in which students meet with selected faculty members to explore areas of research. Students are also required to successfully complete BIOP 200b. In addition, students generally complete the following courses: Advanced Biochemistry (BCHM 101a), Introduction to Physical Biochemistry (BCHM 104b), Structural Molecular Biology (BIOL 102b) and The Electron Microscope (BIOL 101a). Courses to complete the student's program will depend on the student's background and interests. The additional courses may be in the areas of biochemistry, biology, biophysics, chemistry, mathematics, photobiology or physics.

Admission to Candidacy.

Dissertation and Defense.

In order to be admitted to candidacy, students must maintain a satisfactory academic performance and defend successfully two research proposals. The first is part of Biophysics 200b. During the second year, the second research proposal (not in the same field as the thesis) must be developed and defended. An additional requirement for the degree is a thesis proposal (generally defended by the end of the third year)

Each doctoral candidate will submit a dissertation describing his/her research and will be required to defend it in a Final Oral Examination.

Language Requirements. Reading knowledge of one foreign language, chosen from French, German or Russian. A knowledge of computer programming may be substituted.

Courses of Instruction

Biophysics 200b.
Seminar in
Biophysical
Research

This is a required seminar for first-year biophysics students. The seminar is designed to introduce students to quantitative approaches to biological problems through critical evaluation of the biophysical literature. The seminar will not be focused on any particular subject area, but instead will give students practice in attacking problems in a wide range of areas by essentially the same technique: the use of physical and mathematical reasoning. Each week one or two papers that are particularly well suited to quantitative analysis will be chosen and prepared by a "team" of students. The discussion will be aimed at identifying the "core idea" of the papers and at transforming this idea into quantitative, testable predictions. Topics include macromolecular structure and function, spectroscopic methods of structure determination, thermodynamics of ligand-macromolecule interactions. stochastic approaches to electrophysiology and electrostatics of macromolecular surfaces, among others, which will vary from year to year. In consultation with the seminar instructor, each student will develop a research proposition based on independent reading and will prepare a research plan in the form of a mock-thesis proposal. Open to graduate students in other sciences with permission of the instructor.

Offered every year.

Mr. Pochapsky

Biophysics 300a or b. Introduction to Research in Biophysics

Students carry out a project in the research laboratory of one of the faculty members. Projects and faculty are selected from the departments of biochemistry, biology, chemistry and physics. At least three terms of Biophysics 300 are required.

Offered every year.

Staff

Biophysics 301b. Summer Laboratory Rotation Admission by consent of graduate advisor.

Offered every year.

Staff

Students register for Dissertation Research in the 400 series with a faculty member in the program in which they are doing their research.

Following is a partial list of advanced courses that may be of interest to students in the Biophysics Program.

Biochemistry 104b.	Usually offered every year.
Physical Biochemistry	Messrs. Miller and Timasheff
Biology 100a.	Usually offered in odd years.
Photobiology of Cells and Organelles	Messrs. Cibbs and Schiff
Biology 101a. High Resolution	Usually offered every third year.
Structural Methods: A Case Study of Membrane Proteins	Mr. DeRosier
Biology 102b. Structural	Usually offered every year.
Molecular Biology	Will not be offered in 1992.
	Ms. Cohen
Biology 103b.	Usually offered in odd years.
Advanced Topics in Cell and Molecular Biology	Mr. Huxley
Biology 104a.	Usually offered every three years
Structural Cell Biology	Mr. DeRosier
Biology 105b.	Usually offered in odd years.
Eukaryotic Molecular Biology	Messrs. Rosbash, Sen and Haber
Biology 140b. Introductory	Usually offered every year.
Neuroscience	Ms. Marder
Biology 144b. The Neurobiology	Usually offered in even years.
of Memory	Mr. Lisman
Biology 145b. Integrative	Usually offered every third year
Neuroscience	Ms. Marder

Usually offered every year.

Mr. Pochapsky

Chemistry 132h.

Spectroscopy

Advanced Organic Chemistry:

39	Biophysics			
Chemistry 141b. Kinetics	Usually offered every year. Mr. Petsko	Physics 152b. Biological Assembly	Usually offered every third year. Mr. Caspar	
Chemistry 229b. Introduction to X-ray Structure Determination	Usually offered every third year. Mr. Foxman			

Chemistry

Objectives

The graduate program in chemistry, comprising course work, seminar participation and research is designed to lead to a broad understanding of the subject. The graduate program leads to the M.A. and Ph.D. degrees in chemistry. The Ph.D. is offered with specializations in inorganic, organic and physical chemistry and chemical physics. (Detailed information on the interdisciplinary specialization in chemical physics is found following the listing of chemistry courses.) All students will be required to demonstrate knowledge in advanced areas of inorganic, organic and physical chemistry. The doctoral program is designed to be flexible so that individual programs of study may be devised to satisfy the particular interests and needs of each student. In each case this program will be decided by joint consultation between the student, the Graduate Studies Committee and the thesis supervisor, when selected. The doctoral program will normally include a basic set of courses in the student's own area of interest, to be supplemented by advanced courses in chemistry and, where appropriate, biochemistry, biology, mathematics and physics.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to the graduate program in chemistry. In addition, the undergraduate curriculum of applicants should include courses in physics and mathematics (differential and integral calculus) and courses in general, inorganic, organic and physical chemistry.

Admission to advanced courses will be based upon the results of three qualifying examinations, (inorganic, organic and physical chemistry), which will be taken upon entrance. These examinations will determine if the student shall be required to make up deficiencies in preparation. The results of the qualifying examinations will be considered in the determination of support for subsequent years of graduate study and in determining a student's eligibility to continue in a degree program.

Faculty

Professor Peter C. Jordan Chair: Statistical mechanics of membrane transport; electrostatic modeling of ion pores; molecular dynamics; theories of ionic solvation.

Professor Iu-Yam Chan: Magnetic resonance, coherent phenomena and high-resolution optical spectroscopy under high pressure.

Professor Irving R. Epstein: Oscillating chemical reactions and dynamic instabilities; mathematical modeling of biochemical kinetics; polymer aggregation and networks in neural systems. Professor Bruce M. Foxman: X-ray structure determination; coordination polymers; chemical, physical and crystallographic studies of solid-state reactions; automatic solution of crystal structures using novel computer techniques.

Professor Michael Henchman: Chemistry of ions in the gas phase; solvation; acidity and superacidity; isotopic fractionation in interstellar molecules. Professor James B. Hendrickson: Synthesis of natural products; computerization of synthesis design and development of new synthetic reactions.

Professor
Judith Herzfeld:
Nonideality and
long-range order in
solutions of
self-assembling
surfactants and
proteins; solid state
NMR studies of
structure and
function in
biological
membranes.

Professor Philip M. Keehn: Synthetic methods, organic synthesis of strained rings and theoretically interesting molecules; host-guest complexes; plant medicinals; applications of NMR spectroscopy to organic systems; photooxidation; pure and applied laser chemistry of organic systems.

Professor Kenneth Kustin: Inorganic biochemistry; vanadium and iron in tunicate blood cells and human tissues; fast reactions; oscillating reactions.

Professor Gregory Petsko (Rosenstiel Center): Protein crystallography, especially direct observation of transient species by low-temperature and Laue methods; signal transduction in allergy and chemotaxis; protein dynamics; protein engineering; structure/function of p-glycoproteins.

Professor
Myron Rosenblum:
Chemistry of
organometallic
complexes of the
transition elements.
New methods in
organic synthesis
employing
organometallic
complexes.
Electroactive
organometallic
polymers.

Professor
Barry B. Snider
Craduate Advisor:
Development of new
synthetic methods;
mechanism of
synthetically
important reactions;
total synthesis of
natural products.

Professor Colin Steel: Chemistry of excited molecules and radicals; the kinetics and mechanisms of photochemical and thermal reactions; photophysics and photochemistry of infrared laser-induced reactions. solution.

Professor Robert Stevenson: Isolation and structure of natural products; compounds of medicinal interest (steroids, terpenoids, lignans, heterocyclics).

Professor Thomas R. Tuttle: Chemistry of liquid solutions: the composition and structures of species in metal solutions in polar solvents; application of spectroscopy, e.g., magnetic resonance, optical and spectropolarimetry to elucidation of the composition and structure of solutions: theory of chemical species in

Associate Professor Dagmar Ringe (Rosenstiel Center): Protein crystallography and protein engineering. Rational drug design, especially for proteases: mechanisms of enzymatic catalysis by diffraction and mutagenesis: structure and function of aminotransferases: modular protein design.

Assistant Professor James H. Davis, Jr.: Organometallic chemistry Preparation and characterization of organometallic oxo compounds, particularly species in which oxo ligands bridge organometallic and classically inorganic metal centers. Preparation of organic complexes of main group elements

Assistant Professor Thomas C. Poechapsky: Design and synthesis of molecular recognition systems; transient interactions in solution by NMR; NMR of soluble proteins; protein stability and folding by NMR and mutagenesis.

Degree Requirements

Detailed information on the interdisciplinary specialization in chemical physics is found following the listing of chemistry courses. Entering students may be admitted to either the master's or the doctoral program. All candidates for advanced degrees are required to meet the following requirements:

Qualifying Examination. Each student is expected to demonstrate a satisfactory knowledge of undergraduate chemistry by the performance in three qualifying examinations; one each in physical chemistry, organic chemistry and inorganic chemistry. These examinations are set twice a year, before the start of each term. The results of these examinations will determine the student's initial program of course work and will be considered by the Craduate Studies Committee in evaluating the student's progress.

Language and Computer Programming Requirements. There is no foreign language requirement for the M.A. degree. Each student in the organic and inorganic Ph.D. program must demonstrate a useful reading knowledge of scientific French, German or Russian within the first two years of residence. Each student in the physical chemistry Ph.D. program must demonstrate a working knowledge of Fortran, Basic or C.

Seminar.

Each student in residence is required to attend and participate in the seminar in his/her chosen area of concentration throughout the period of graduate study. Each student is expected to present two seminars during his/her residence.

Teaching.

It is expected that all graduate students will do some undergraduate teaching during the course of their studies.

Placement and Evaluation of Progress. Recommendations for the course of study in the first year will be based upon the performance on the initial qualifying examinations. Admission to the graduate degree programs will be based on the student's record in course work during the first year and his/her performance on the qualifying examinations. Further progress will be evaluated on a yearly basis by the Graduate Studies Committee.

Master of Arts

Program of Study.

Each candidate is required to complete successfully one year of study at the graduate level in chemistry, or, with prior permission of the Graduate Studies Committee, in related fields. The program will include laboratory work and, normally, five term courses at the graduate level. The detailed program of study will be chosen jointly by the candidate and the Graduate Studies Committee to reflect the candidate's area of interest as well as a perspective of other areas.

Residence Requirement. The minimum residence requirement for the M.A. degree is one year.

Doctor of Philosophy

Program of Study.

A balanced program of study will be prepared by the students and the Graduate Studies Committee. In general, students will be required to take a minimum of seven graduate-level courses, of which two must lie outside the student's field of research. If a student fails to pass a qualifying examination after two attempts, a graduate course must be taken in that area of chemistry before the end of the second year. A list of courses appropriate for this purpose is available upon request. For students entering with a master's degree or the equivalent, two to five courses may be transferred for credit. It is expected that doctoral students will choose a research advisor during the first year, normally in the second term.

Admission to Candidacy.

A student is recommended for admission to candidacy for the doctoral degree upon certification by his/her thesis advisor and the Graduate Studies Committee that the student has satisfied the qualifying and language examination requirements and has made satisfactory progress in the program of study, research and the final Ph.D. examinations.

Final Examinations.

The graduate student must demonstrate proficiency by taking final examinations in his/her major field: organic, physical or inorganic chemistry. In the organic chemistry program, a cumulative examination procedure is used. Each year, six one-hour examinations (on unannounced topics) and one three-hour examination (on an announced reading) are given. Each one-hour examination passed is worth one unit and each reading examination is worth up to three units depending upon the pass level. The final examination requirement is satisfied by the student having accumulated nine units of which no more than six are from reading examinations. In physical chemistry and inorganic chemistry, the student is assigned a set of propositions generally during the third term of graduate work. In physical chemistry the set consists of three propositions; the student takes a written examination on one

proposition and is examined orally on all three. In inorganic chemistry the student is assigned two propositions. He/she takes a written examination on one proposition and is examined orally on a research proposal (supplied either by the student or faculty) and the remaining proposition. Students in all fields must maintain satisfactory progress by passing these examinations.

Residence Requirements. The minimum residence requirement for the Ph.D. degree is two years.

Dissertation and Defense. A dissertation is required that describes the results of an original investigation and demonstrates the competence of the candidate in independent investigation, critical ability and effectiveness of expression. The student must successfully defend the dissertation in a Final Oral Examination.

Courses of Instruction

Chemistry 110b. Instrumental Analytical Chemistry

Techniques of instrumental chemical analysis. Application of instrumental methods to the separation and analysis of complex mixtures. Students rotate through ongoing research laboratories. Data treatment includes computers in the analytical chemistry laboratory. Prerequisite: Satisfactory grade in CHEM 41a, 41b, 59a, 59b or the equivalent.

Usually offered in odd years.

Staff

Chemistry 121a. Inorganic Chemistry I, Lectures

Symmetry and structure; bonding; physical and chemical aspects of the chemistry of the elements. Prerequisite: Satisfactory grade in an undergraduate course in physical chemistry.

Three lecture hours a week.

Usually offered every year.

Mr. Foxman

Chemistry 111a. Computational Chemistry

An introduction to selected topics in computational chemistry. These will include two or three of the following: molecular modeling; numerical integration methods; quantum mechanical modeling; least squares analyses; design of synthesis; and data analysis. The course will be devoted to the practical implementation of generally available software routines and to attaining an understanding of their capabilities.

Usually offered in even years.

Mr. Jordan

Chemistry 122b. Inorganic Chemistry II, Lectures

Transition metal chemistry: classical coordination compounds and organometallics. Descriptive chemistry of main group compounds. Inorganic rings, chains and clusters. Prerequisite: CHEM 25a,b or permission of instructor.

Usually offered every year.

Mr. Davis

Chemistry 130a. Advanced Organic Chemistry: Structure Introduction to group theory and its application to molecular orbital theory and spectroscopy.

Usually offered every year.

Mr. Rosenblum

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Chemistry 131a. Advanced Organic Chemistry: Topics in Structure and Reactivity	Broad coverage of a variety of transformations involving additions, eliminations, substitutions, oxidations, reductions and rearrangements. Usually offered every year. Mr. Hendrickson	Chemistry 1+1b. Kinetics	Rate laws and experimental methods. Energy transfer. Experimental and theoretical study of reactions in the gas phase and in solution. Enzyme kinetics and inhibition. Nonlinear dynamics and oscillating reactions. Prerequisite: Satisfactory grade in CHEM 141a. Usually offered every year.
Chemistry 132b.	Application of spectroscopy to the elucidation		Mr. Petsko
Advanced Organic Chemistry: Spectroscopy	of structure and stereochemistry of organic compounds with special emphasis on modern NMR methods.	Chemistry 142a. Quantum	Solutions of the Schrodinger equation for simple systems, Matrix mechanics. Operator
	Usually offered every year.	Chemistry	techniques and approximation methods. Atoms. Symmetry in molecular quantum
	Mr. Pochapsky		mechanics. The Bron-Oppenheimer separation. Diatomic molecules. Prerequisite: Satisfactory grade in an undergraduate course
Chemistry 133a.	Principles of the determination of reaction		in physical chemistry.
Advanced Organic Chemistry:	mechanisms. Substituent effects. Mechanisms of nucleophilic and electrophilic substitution		Usually offered every year.
Mechanisms	reactions. Carbocation chemistry. Mechanisms of addition and elimination. Acidity and basicity.		Mr. Tuttle
	Usually offered every year.	Chemistry 145b.	Topics vary from year to year.
	Staff	Special Topics in Chemistry	Usually offered every third year.
			Staff
Chemistry 134b.	Modern synthetic methods are covered, with		
Advanced Organic Chemistry:	an emphasis on mechanism and stereochemical control. Formation of	Chemistry 150c.	Topics vary from year to year.
Synthesis	carbon-carbon single and double bonds and carbocyles and procedures for oxidation,	Special Topics in Chemistry	Usually offered every third year.
	reduction and functional group interchange are discussed. Selected total syntheses are examined.		Staff
	Usually offered every year.	Chemistry 200d.	Usually offered every year.
	Mr. Snider	Advanced Chemistry Laboratory	Staff
Chemistry 137b.	Natural products chemistry will be surveyed		
The Chemistry of Organic Natural Products	within a biogenetic framework. Occurrence, isolation structure elucidation, biogenesis and synthesis will be covered with an emphasis on	Chemistry 220c. Inorganic Chemistry	Required of graduate students in inorganic chemistry, who must audit this course each year.
	modern methods of synthesis and establishing biogenesis. Prerequisite: Satisfactory grade in	Seminar	Offered every year.
	an undergraduate course in organic chemistry.		Staff
	Usually offered every year.		
	Mr. Hendrickson	Chemistry 229b. Special Topics in Inorganic	Basic diffraction and space group theory, practical manipulations of crystals and X-ray diffraction equipment, solving crystal
Chemistry 141a. Chemical Thermodynamics	Classical and irreversible thermodynamics: laws, tools and applications. Prerequisite: Familiarity with multivariable calculus.	Chemistry: Introduction to X-ray Structure	structures and interpretation of structural chemistry. Course will feature self-paced tutorials on the VAX 8650.
	Usually offered every year.	Determination	Usually offered every third year.
	Mr. Jordan		Mr. Foxman
		Chemistry 231c. Organic Chemistry	Required of graduate students in organic chemistry, who must audit this course each year.
		Seminar	Offered every year.

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Chemistry 232b. Heterocyclic Chemistry	The nature of aromatic heterocycles will be surveyed, followed by detailed discussion of their characteristic reactions and modes of synthesis. The course is organized to show a general predictive framework behind the details. Emphasis is placed on the mechanisms of heterocycle reactions. Usually offered in odd years. Mr. Hendrickson	Chemistry 245a. Thermodynamics of Ionic Solvation	Experimental methods for determining the thermodynamic quantities pertaining to ionic solvation: solubilities, electrochemical cell potentials and colligative properties. The structures of dilute ionic solutions: Deybe-Huckel theories, theories of ionic association, ionic size, single ion solvation energies. Measurements of ionic activity coefficients and ionic association equilibrium constants. Relationship of the spectroscopic properties of solvated ions to their thermodynamic properties. Determination of single ion quantities. Relationship of the
Chemistry 234b. Chemistry of Organometallic Compounds	The chemistry of organo-transition metal complexes, including their structures, chemical reactions and use as reagents in organic synthesis. Usually offered every third year.		properties of ion-solvent clusters to solvation. Usually offered in even years. Staff
		Cl aro	D : 1 C 1 : 1 : 1
	Mr. Rosenblum	Chemistry 250c. Chemical Physics Seminar	Required of graduate students in chemical physics, who must audit this course each year
Chemistry 235b. Special Topics in	The first half of the course will be concerned with molecular recognition phenomena.		Offered every year.
Organic Chemistry	Topics include the selective complexation of		Staff
	ground state species and experimental methodology for characterization of ground state complexes, selectivity in synthesis by precomplexation, catalysis by enzymes, enzyme mimics and catalytic antibodies. Current directions and methods in bio-organic research will be emphasized. The second half will be concerned with detailed discussion of modern NMR techniques,	Research Courses	
		Chemistry 401d. Organic Chemistry	Chemistry of natural products; steroids, triterpenoids, bisarylpropanoids, benzofurans Mr. Stevenson
	especially 2D methods. Pulse sequences, phase cycling and other experimental		
	considerations will be emphasized. Usually offered every third year.	Chemistry 403d. Organic Chemistry	Chemistry of organometallic complexes of the transition elements. New methods in organic synthesis employing organometallic complexes. Electroactive organometallic
	Mr. Pochapsky		polymers.
Chemistry 241c. Physical	Required of graduate students in physical chemistry, who must audit this course each		Mr. Rosenblum
Chemistry Seminar	year. Offered every year.	Chemistry 404d. Organic Chemistry	Synthesis of natural products; development on new synthetic reactions; computerization of synthesis design systematics
	Staff		synthesis design systematics. Mr. Hendrickson
Chemistry 243b. Statistical Fhermodynamics	Elementary statistical mechanics of ensembles of molecules and applications to thermodynamic systems.	Chemistry 405d. Biochemistry	Structure and function proteins by X-ray crystallography, site-directed mutagenesis and molecular dynamics simulations.
	Usually offered every third year.		Time-resolved studies of enzyme catalysis by Laue diffraction. The structural basis of the
	Staff		allergic response. Multi-drug resistance and the cystic fibrosis of gene product.
			Mr. Petsko
		Chemistry 407d. Biochemistry	Structure and function of proteins by kinetic and structural methods, coupled with low temperature and time-resolved diffraction methods; structures of native and mutant proteins, complexed and uncomplexed, aimed at modeling of active sites and specific
			inhibitors.

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Chemistry ±08d. Physical Chemistry Chemistry ±09d. Inorganie Chemistry	Experimental and theoretical study of chemical species in solution. Spectroscopic investigations of metal solutions in polar solvents. Mr. Tuttle Inorganic biochemistry, vanadium and iron in tunicate blood cells and human tissues, fast reactions and oscillating reactions.	Chemistry 417d. Organic Chemistry	Organic synthesis of strained rings and theoretically interesting molecules, synthetic methods, enclathration and host-guest complexation in trio-thymotide, plant medicinals, application of nuclear magnetic resonance spectroscopy to organic systems, photooxidation, thermal chemistry and pure and applied laser chemistry of organic systems. Mr. Keehn
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Chemistry 410d. Biophysical Chemistry	Experimental and theoretical studies of long-range order in self-assembling systems and functional mechanisms in biological membranes.	Chemistry 419d. Inorganic Chemistry	X-ray structure determination; coordination polymers; chemical, physical and crystallographic studies of solid-state reactions and automatic solution of crystal structures using novel computer techniques.
	Ms. Herzfeld		Mr. Foxman
Chemistry #11d. Physical Chemistry	Chemistry of excited molecules and radicals and the kinetics and mechanisms of photochemical and thermal reactions. Photophysics and photochemistry of infrared laser-induced reactions. Mr. Steel	Chemistry #21d. Organic Chemistry	Synthetic methodology and natural product synthesis. Carbon-carbon bond forming reactions of alkenes and their application to natural product synthesis, intramolecular reactions, oxidative free-radical cyclizations, ketene cycloadditions, ene and Prins reactions and synthesis of biologically active natural products.
			Mr. Snider
Chemistry 413d. Physical Chemistry	Membrane transport, electrostatic modeling of ion pores, molecular dynamics of ionic motion in biological molecules and theories of ionic solvation. Mr. Jordan	Chemistry 423d. Organic Chemistry	Multimolecular complexes, amino acid residue side-chain interactions in peptides and proteins by NMR, globular protein stability and protein structure by 2D NMR methods.
Ol	Tr		Mr. Pochapsky
Chemistry 414d. Physical Chemistry	Kinetic studies of the reactions and properties of ions and solvated ions in the gas phase. Mr. Henchman	Chemistry 424d. Inorganic Chemistry	Preparation and characterization of main group compounds containing bonds to CO or pi-bonded olefins and acetylenes. Synthesis and characterization of compounds
Chemistry 415d. Physical Chemistry	Experimental and theoretical studies of oscillating chemical reactions and dynamic instabilities; theoretical approaches to neurobiology and neural networks; mathematical modeling of biochemical kinetics and polymer aggregation.		containing multiple bonds between carbon and main group elements. Heteroatom-allyl complexes of transition metals and main-group elements. Reaction chemistry of organometallic oxo complexes.
	Mr. Epstein		Mr. Davis
Chemistry 416d. Physical Chemistry	High-pressure effects on triplet state molecule, dynamical processes in molecular crystals studied by spin echo under pressure, high-resolution optical spectroscopy under pressure, Davydov splittings and electron-phenon coupling.	Chemistry Colloquium	Lectures by faculty and invited speakers. Required of all graduate students. Noncredit.
	Mr. Chan		

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Chemistry

Chemical Physics

Objectives

Ph.D. in Chemistry with Specialization in Chemical Physics The graduate program in chemical physics is an interdisciplinary specialization designed to meet the needs of students who wish to prepare themselves for the study of scientific problems using the methods and theories of modern physics and physical chemistry. This objective is attained by (1) formal course work in chemistry, physics and, possibly, mathematics; (2) participation in relevant graduate seminars; (3) a program of supervised research involving chemical physics and (4) independent study.

The program is designed to be flexible in providing individual programs of study to satisfy the particular interests and needs of each student. Final programs of study and research will be jointly arrived at by the student, his/her research supervisor and the Chemical Physics Committee. Only candidates for the Ph.D. will be accepted.

Admission

The general requirements for admission to the Graduate School apply to candidates for admission to the graduate program in chemical physics. Applicants should have a strong undergraduate background in chemistry, physics and mathematics.

Degree Requirements

No master's degree is offered with specialization in chemical physics, but students who satisfy the appropriate requirements will be eligible for the M.A. degree in chemistry.

All candidates for the Ph.D. degree in chemistry with specialization in chemical physics must meet the following requirements:

Qualifying Examinations. Each student is expected to demonstrate a satisfactory knowledge of undergraduate chemistry, physics and mathematics by the performance in three qualifying examinations: organic or inorganic chemistry and one each in physical chemistry and physics/mathematics. These examinations are set twice a year, in August and January. The results of these examinations will determine the student's initial program of course work and also be considered by the Chemical Physics Committee in evaluating the student's progress.

Language and Computer Programming Requirements. There is no foreign language requirement for the Ph.D. degree in chemical physics. Each student must demonstrate a working knowledge of Fortran, Basic or C. Seminar.

Each student in residence is required to attend and to participate in the Chemical Physics Seminar. Participation in other seminars in physics and chemistry is also recommended.

Teaching.

It is expected that all graduate students will do some undergraduate teaching during the course of their studies.

Doctor of Philosophy

Program of Study.

It is expected that some candidates for the Ph.D. degree in chemistry with specialization in chemical physics may require a longer period of time in course work than will students in either of the fields of physics or chemistry. In general, the program for the Ph.D. in chemistry with specialization in chemical physics will include eight term graduate courses: four in physical chemistry, one in either organic or inorganic chemistry and three in physics. No specific course work in mathematics is required, but students are expected to be familiar with the techniques necessary for the proper pursuit of their research. In addition, each student is expected to demonstrate a knowledge of elementary computer programming.

Students may satisfy their program's course requirements in part or in entirety by passing (or giving evidence of ability to pass) the final examination in the appropriate number of such courses. Courses in areas related to chemistry and physics may also be considered by the Chemical Physics Committee in partial fulfillment of the requirements.

Admission to Candidacy.

Students are recommended for admission to candidacy for the doctoral degree upon certification by their thesis advisor and the Chemical Physics Committee that they have satisfied the qualifying and language examination requirements and made satisfactory progress in the program of study, research and the final Ph.D. examination.

Final Examinations. Final examinations in chemical physics are generally taken during the third term of graduate work. The student is assigned a set of three propositions; the student takes a written examination on one proposition and is examined orally on the remaining two.

Residence Requirements. The minimum residence requirement for the Ph.D. degree is two years.

Dissertation and Defense. A dissertation is required that describes the results of an original investigation and demonstrates the competence of the candidate in independent investigation, critical ability and effectiveness of expression. An oral defense of the dissertation will be held.

Cognitive Science

See Psychology

Comparative History

Objectives

The graduate program in comparative European history leads to the degree of Doctor of Philosophy. Applicants wishing to take only the degree of Master of Arts are welcome to apply for admission to a special program described below.

The Graduate Program trains students to approach the past from a comparative perspective. This method represents the most fruitful way to interpret the past, and the program fosters it in two ways. First, students will develop expertise in two broad fields of history — either medieval and early modern or early modern and modern. Second, they will study their fields from a thematic approach that transcends national boundaries and moves away from conventional periodization.

The Comparative History Program gives students a broad understanding of the development of Europe and fosters the ability to make cross-cultural comparisons. The thematic approach is central to the process. The Brandeis history faculty is exceptionally diverse in its interests and offers the student a variety of approaches to the past: the student a variety of approaches to the past: the student of political structure, economics, the family, social organization, psychohistory, culture and thought. Each student will read widely on two of these subjects and in the process learn what developments were unique and which ones were comparable over time and space.

Finally, students will take a non-European field in history drawn from the Americas, the Middle East or the Far East. This outside field may be completed in such related graduate programs as anthropology, economics, English and American literature, the joint program of literary studies, Near Eastern and Judaic Studies, politics or sociology.

The program is designed to prepare students for the competitive academic environment of the next decade. It trains them in methods of historical research and equips them to teach a broad range of subjects. On a deeper level, comparative history fosters intellectual flexibility and interdisciplinary skills that can be creatively employed both inside and outside academia.

A small, select student body will work in close cooperation with the faculty. Most instruction will take place in seminars specifically designed for graduate students or in individual conferences with faculty advisors. From the beginning, the curriculum will help students prepare for their qualifying examinations and guide them toward eventual dissertation research.

During the first year, students must prepare a major research paper on a topic chosen in consultation with a principal advisor. The paper may be comparative in research (involving two or more symmetrical case studies), or it may focus upon a single case (with that research informed by a reading of secondary literature on similar cases). The paper constitutes the major intellectual enterprise of the first year, and students devote one-quarter of their time to it in the first year.

The student will also enroll in two introductory graduate colloquia, which cover the early modern and modern periods. During both of their first two years of residence, students must also enroll in the comparative history seminar, which treats significant problems in comparative perspective and introduces students to the methods and issues in comparative history. Students must also enroll in the historiography colloquium (offered alternate years). Finally, before they may take the qualifying examination all students must complete a tutorial or other work focusing on a part of the world geographically or chronologically removed from their principal area of specialization with a view to gaining a comparative perspective on their major research interest.

Students are expected to have a general mastery of two broad fields of history, either medieval and early modern or early modern and modern. Specifically, they must demonstrate a mastery of two thematic fields within their general fields or three thematic fields from one period and one from another. These thematic fields will normally be chosen from such approaches as cultural, diplomatic, economic, family, intellectual, ethnic, political and social history. With the approval of the faculty, a student may substitute a methodological field, such as psychohistory, anthropological history or quantitative history for half of one conventional theme. Students may also petition to substitute the medieval period for a portion of the early modern period.

Students should normally plan to complete all work for the doctorate, including the dissertation, within four to five years after entering the program; prolongation of study past the sixth year is discouraged.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to the Master of Arts program. Students with a sound preparation in history and who have demonstrated unusual imagination and critical insight will receive special consideration. Undergraduate majors in the other social sciences or in allied fields such as comparative literature may, however, apply. Applicants should submit a sample of written work, preferably in European history.

Students may be admitted for full- or part-time work. Partial scholarship assistance is available for a limited number of exceptional candidates.

Master of Arts

This one-year, full-time program has the following requirements:

Each student must pass an examination in one foreign language. Each student will take a one-semester colloquium in Early Modern Comparative History; a one-semester colloquium in European Comparative History since the 18th century; a one-semester seminar in Comparative History, the specific topic of which varies from year to year; the Research Seminar; a two-semester course in which each student writes a Master of Arts thesis and addresses issues of historiography and methodology and three other one-semester graduate courses in history.

Faculty

Professor Eugene C. Black Chair: Modern history. Political and social institutions.

Professor Rudolph Binion: Modern history. Culture and thought. Psychohistory. Professor Samuel K. Cohn, Jr.: Renaissance and early modern history.

Professor David H. Fischer: Modern history. Social institutions.

Professor Gregory Freeze: Russia and Germany. Social history. Profesor Jacqueline Jones: American Southern and women's history.

Professor Morton Keller: Legal and political institutions. Professor Stephen A. Schuker: Modern diplomatic, economic, political and business history.

Professor Bernard Wasserstein: Modern European, Jewish and Middle Eastern history. Associate Professor Sylvia Arrom: Latin America. Women's history.

Associate Professor William E. Kapelle: Medieval history.

Associate Professor Alice Kelikian: Modern history. Social institutional history. Associate Professor James Kloppenberg: Intellectual and cultural history.

Degree Requirements

Master of Arts

An M.A. degree in history will be awarded to those students who have satisfactorily completed one year of residence as full-time students, completed the mandated first-year courses, fulfilled the language requirement and completed their research seminar requirement.

Doctor of Philosophy

Program of Study.

During the first year in the program, students will complete a major research paper and the two colloquia in European history. Within the first two years, they must also take a historiography course and two seminars in comparative history, besides fulfilling the outside-field requirement.

Qualifying Examination.

Each student will take the qualifying examination at the end of the fourth term. Any student who has failed to complete the qualifying examination by the fifth term will be dropped from the program.

Category.

The student will normally define a dissertation topic in the term preceding the qualifying examination but in no case later than the end of the fifth term in the program.

For the "category examination", students will make an oral presentation setting their proposed dissertation topic in comparative perspective.

49	Comparative History		
Language Requirement.	The use of foreign languages is an essential tool for the comparative historian. Each student will be expected to pass, upon admission, one language examination testing the ability to read historical prose with a dictionary. The second language examination must be passed before taking the qualifying examination. All students must show	Admission to Candidacy.	A student may be admitted to candidacy for the Ph.D. degree when he/she has completed all course and residence requirements, demonstrated proficiency in the required foreign languages and passed the qualifying and category examinations.
	examination. All students fritist snow competence in French and German. Medieval students must also offer Latin. Students may in some instances petition to substitute a language appropriate to their research interests for either French or German.	Dissertation Defense.	When the student's dissertation committee accepts the completed dissertation, the candidate must defend it at a Final Oral Examination.
Courses of Instru	uction		
Seminars		Comparative History 400d. Dissertation	Specific sections for individual faculty members as requested.
History 190a.	A critical analysis of classical historiography.	Research	Offered every year.
Historiography	Usually offered in odd years.		Staff
	Mr. Kapelle	Comparative History 500.	
Comparative History 197b. Seminar in Comparative History: Divided Cities	Analysis of political, ethnic and social divisions in urban concentrations. Case studies of medieval, early modern and modern cities on several continents, including	Registration in Time	
	Damascus, Jerusalem, Paris, Rome and Shanghai.	In addition the following courses may be taken.	
	Usually offered every year.	History 110a. The Civilization	Usually offered every year.
	Mr. Wasserstein	of the Early Middle Ages	Mr. Kapelle
History 199a. Colloquium in	An introduction to the major issues and methods in the social history of Europe	History 110b.	Usually offered every third year.
Early Modern European History	during the early modern and modern periods.	The Civilization of the High and	Mr. Kapelle
	Usually offered every year. Mr. Cohn	Late Middle Ages	
	Mr. Com	History 112b.	Usually offered in odd years.
Comparative History 199b. Coll oquium in	Comparative examination of major historical issues in Europe from the 18th through the 20th centuries.	The Crusades and the Expansion of Medieval Europe	Mr. Kapelle
European Comparative	Usually offcred in even years.	History 113a.	Usually offered in odd years.
History Since the Eighteenth Century	Mr. Black	English Medieval History	Mr. Kapelle
Comparative	Specific sections for individual faculty	History 120a.	Offered every year.
History 300a and b.	members as requested.	Colloquium in Medieval Studies: From the Vikings	Mr. Kapelle
Research Papers	Offcred every year.	to Henry II	
	Staff	History 121b.	Usually offered in odd years.
Comparative History 320a	Specific sections for individual faculty members as requested.	Consequences of the Black Death	Mr. Colin
and b. Readings	Offered every year.		
	Staff		

50	Comparative History		
History 123a. The Renaissance	Usually offered every fourth year. Mr. Cohn	History 133a. The Politics of Enlightenment	Usually offered alternate years. Mr. Hulliung
History 123b. Reformation Europe	Usually offered every third year. Mr. Kaplan	History 134a. Nineteenth- Century Europe: From Revolution to National	Usually offered alternate years. Mr. Black
History 124a. The Revolution of the Saints	Usually offered every third year. Mr. Kaplan	Unification 1789-1870	
History 125a. Europe in the Age of Crisis, 1550-1700	Usually offered in odd years. Mr. Kaplan	History 134b. Nineteenth- Century Europe: Nationalism, Imperialism, Socialism, 1870-1914	Usually offered in even years. Mr. Black
History 125b. The Golden Age of Holland	Usually offered every third year. Mr. Kaplan	History 137a. Evolution of the	Usually offered in odd years. Mr. Schuker
History 126b. Witcheraft and Magic in Early Modern Europe	Usually offered in odd years. Mr. Kaplan	International System, 1815-1945 History 138a. Economy and Society in Europe,	Usually offered in even years. Ms. Kelikian
History 127a. Women, Sexuality and Family Life in Early Medieval Europe	Usually offered in odd years. Mr. Kaplan	History 138b. Industrialization and Social Change, 1900 to	Usually offered every year. Ms. Kelikian
History 127b. Early Modern France	Usually offered in odd years. Staff	History 139a. Women, Work and Family	Usually offered every year. Ms. Kelikian
History 128b. Early Modern Culture: Society	Usually offered in even years. Staff	History 139b. Fascism East and	Usually offered every third year.
History 130a. The French Revolution	Usually offered in even years. Mr. Black	West History 141b. Studies in British	Ms. Kelikian Usually offered in odd years.
History 131a. The Scientific Revolution	Usually offered in even years. Staff	History: 1830 to the Present	Mr. Black
History 132a. European Thought and	Usually offered in even years. Mr. Binion	History 142b. Twentieth-Century Europe	Usually offered every third year. Mr. Wasserstein
Culture: Marlowe to Mill History 132b.	Usually offered every year	History 144b. Right and Left in Europe from 1900	Usually offered every fourth year. Mr. Jankowski
European Thought and Culture Since Darwin	Usually offered every year. Mr. Binion	History 145b. Introduction in Modern France	Usually offered every third year. Mr. Jankowski

51	Comparative History		
History 146b. Hitler, Germany and Europe	Usually offered every third year. Mr. Binion	History 184a. Arabs and Jews in Palestine, 1856-1948	Usually offered every third year. Mr. Wasserstein
History 147a. Rise of Imperial Russia	Usually offered in odd years. Mr. Freeze	History 186a. The Second World War	Usually offered every third year. Mr. Jankowski
History 147b. Russia Since 1861	Usually offered in odd years. Mr. Freeze	History 191b. Psychohistory	Usually offered in odd years. Mr. Binion
History 149a. Topics in Soviet History	Usually offered in odd years. Mr. Freeze	History 194b. Politics and Diplomacy in Europe,	Usually offered in odd years. Mr. Schuker
History 175a. History of Mexico, 1700 to the Present	Usually offered in odd years. Ms. Arrom	1914-1945	

Comparative Literature

See Joint Program of Literary Studies

Computer Science

Objectives

The graduate program in computer science is concerned with the fundamental concepts arising in the development and use of computing systems, including the study of computational complexity and information theory, the design and analysis of serial and parallel algorithms, the design of programming languages and systems and artificial intelligence.

A normal program of study in computer science at Brandeis starts with two years of basic graduate course work. At the completion of this course work and a research project, students are eligible for a master's degree. During this initial two-year period, candidates for the degree of Doctor of Philosophy complete the qualifying examination and select a thesis topic and advisor. Dissertation research typically requires two to three additional years.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of the catalog, apply here. Applicants for admission to the computer science program must submit three letters of recommendation and are also required to take the Graduate Record Examination, including the advanced test in computer science. Funds from research grants and fellowships are available to provide financial support for well-qualified students.

Faculty

Professor Jacques Cohen Chair: Compiler design. Analysis of parallel algorithms. Logic programming. Data structures.

Professor Ira M. Gessel: Combinatories. Number theory.

Professor David L. Waltz: Artificial intelligence. Natural language processing. Vision. Connectionist systems. Adjunct Associate Professor Edward Balkovich: Distributed computing. Associate Professor Max Chretien: Computer graphics. Computer science education.

Associate Professor James A. Storer: Parallel computation. Robotics. Data compression and image processing. Algorithms. Assistant Professor Richard Alterman: Artificial intelligence. Natural language processing, memory-based reasoning and common sense planning.

Assistant Professor Timothy J. Hickey: Analysis of algorithms. Logic programming and parallel processing. Symbolic manipulation. Assistant Professor Harry G. Mairson: Complexity theory. Analysis of algorithms. Lower bounds. Semantics of programming languages.

Assistant Professor James Pustejovsky: Artificial intelligence. Computational linguistics. Machine learning.

Assistant Professor Zhijing G. Mou: Parallelism. Programming languages. Algorithms. Lecturer
Martin Cohn:
Information theory.
Codes. Sequences.
Data compression.

Degree Requirements

Program of Study.

Satisfactory completion of an approved sequence of eight graduate computer science courses, where at least two courses are taken from each of the three areas of artificial intelligence, languages/systems and algorithms/theory of computation. Formal course sequence approval is required by obtaining the signature of the student's current advisor or the director of graduate studies. Exceptions may be granted on an individual basis to allow for courses taken at the undergraduate level, in other departments or at another university. The course requirements must be completed within the first two years of study, typically three courses in the first two terms and one course in each of the next two terms. Exceptions for part-time study may be granted on an individual basis.

Doctor of Philosophy

Research and Dissertation Advisor.

Upon entering the program, students are assigned a tentative advisor. By the end of the first year the student must obtain the consent of a computer science faculty member to serve as his/her advisor and dissertation committee chairperson. The advisor then submits for departmental approval the names of at least two additional faculty members to serve on the committee.

General Examination.

During the first summer and throughout the second year, the student is expected to engage in independent study with his/her advisor. The general examination consists of a presentation to the computer science faculty of a current research area (including a literature review and a discussion of research problems) followed by a question and answer session that addresses both the material presented and the student's general knowledge of material covered in his/her course work.

Master of Arts

Research Advisor.

Upon entering the program, each student will be assigned a tentative advisor. By the end of the first year, the student must obtain the consent of a computer science faculty member to serve as his/her permanent research advisor.

A Master's Project showing advanced knowledge of a research area and some original work is required. Normally, the student will have found a permanent advisor by the middle of the second term of study and will begin work on the project during the summer following the first year.

Residence Requirement.

Language

Requirement.

The minimum residence requirement is two years at full-time or the equivalent in part-time study.

There is no foreign language requirement for the master's degree.

Research Proposal.

The research proposal consists of a written proposal together with an oral presentation to the computer science faculty outlining the student's doctoral research and contains a thorough literature review as well as preliminary original work. The research proposal typically addresses a topic in the area of the presentation made at the general examination. The research proposal must be completed within one year of the general examination.

Admission to Candidacy.

To be admitted to candidacy for the Ph.D. degree, the student must satisfactorily complete an approved schedule of courses. demonstrate superior performance in the general examination and have his/her research proposal approved by the program.

Language Requirement.

There is no foreign language requirement for the doctoral degree.

Dissertation and Final Oral Examination.

After completion and tentative approval of the dissertation by the student's dissertation committee, the dissertation will be available for inspection for one month in the program office. A public defense is then scheduled. The doctoral degree will be awarded only after the successful defense of the dissertation.

Courses of Instruction

Computer Science 110a. Artificial Intelligence	This course will address A.I principles and state-of-the-art. Topics include knowledge representation, reasoning, learning, natural language understanding and massively parallel models of cognitions. Usually offered every year. Mr. Pustejovsky	Computer Science 180a. Algorithms	Basic concepts in the theory of algorithm design and analysis are dealt with. These include advanced data structures and algorithms, NP and PSPACE parallel algorithms and specialized topics by the instructor. Usually offered every year. Mr. Storer
Computer Science 120a. Topics in Computer Systems	Explores existing and proposed computer systems, ranging from operating systems to automatic pilots, airline reservation systems, window systems, spread sheets, data bases, design automation systems and library automation systems. Usually offered every year. Staff	Computer Science 190a. Theory of Computation	An introduction to the semantics of programming languages. Topics include elementary lambda calculus and combinatory logic; denotational semantics; continuous functions and their relation to models of computation and polymorphism, type inference and logic. Usually offered every year. Mr. Mairson
Computer Science 140a. Logic Programming	Studies the relationship of Prolog to predicate calculus, horn clauses, unification algorithms, intelligent backtracking, infinite trees, inequalities, implementation issues and concurrent Prolog. Usually offered every year.	Computer Science 200a and b. Readings	Specific sections for individual faculty members as requested. Staff
Computer Science 150a. Compiler Design	Mr. Hickey Covered are advanced topics in parser and lexical scanner generation, data flow analysis, code generation and parallel compilation. Usually offered every year.	Computer Science 215a. Advanced Topics in Artificial Intelligence	Topics vary from year to year. The course may be repeated with the approval of the instructor. Usually offered every year. Mr. Pustejovsky
Computer Science 160a. Parallel Computing and Programming	Mr. Hickey Provides students with a general background in parallel computation at the levels of architecture, communication, data structures, algorithms, analysis, programming models and programming languages. Usually offered in odd years. Mr. Mou	Computer Science 215b. Advanced Topics in Artificial Intelligence Computer Science 218a. Psychology Seminar in Cognitive Science	See COSI 215a for description. Usually offered every year. Mr. Alterman See PSYC 208a for description. Usually offered every year. Staff
Computer Science 170a. Information Theory and Cryptology	Information theory as applied to the problems of rewriting digital data to be more concise, more error-resistant or more appropriate to physical environments. Usually offered in odd years. Mr. Cohn	Computer Science 230a. Parallel Algorithms and VLSI design	Theoretical issues in the design of parallel algorithm and the layout of VLSI circuits. Topics include fundamentals of how VLSI circuits work (student design a small nMOS or cMOS chip), VLSI layout, time/area tradeoffs, systolic arrays, general purpose models of parallel computation (butterfly, hypercube, fat trees, etc.), "silicon compilation", wafer-scale circuits, 3-dimensional circuits and optical circuits.
Computer Science 171a. Cryptology: Cryptography and Cryptanalysis	The study of data secrecy, privacy and security. How can information be encoded so that eavesdroppers can neither alter it nor gain any knowledge or advantage? Usually offered in even years. Mr. Cohn		Usually offered in even years. Mr. Storer

Mathematical description of basic concepts of programming languages. Modeling using the lambda-calculus. Derivation of compilers from formal descriptions of languages. Usually offered in even years.	Computer Science 310d. Seminar in Artificial Intelligence	Usually offered in even years. Staff
Mr. Storer	Computer Science 340a.	Usually offered in even years.
Content of course varies from year to year. Usually offered in even years.	Programming Languages	Clair
Staff	Computer Science 390d. Seminar in	Usually offered in even years. Staff
Offered every year. Staff	Computation	
	Computer Science 400d. Dissertation	Specific sections for individual faculty members as requested.
	programming languages. Modeling using the lambda-calculus. Derivation of compilers from formal descriptions of languages. Usually offered in even years. Mr. Storer Content of course varies from year to year. Usually offered in even years. Staff Offered every year.	programming languages. Modeling using the lambda-calculus. Derivation of compilers from formal descriptions of languages. Usually offered in even years. Mr. Storer Computer Science 340a. Seminar in Programming Languages Usually offered in even years. Staff Computer Science 390d. Seminar in Theory of Computation Offered every year. Staff Computer Science 390d. Seminar in Theory of Computation Computer Science 400d.

Cross-Registration at Boston College, Boston University and Tufts University

A full-time graduate student at Brandeis University may enroll in one graduate course each term at Boston College, Boston University or Tufts University. Brochures suggesting courses for cross-registration at each of the host institutions are available at the graduate school office of each institution.

Computer Science

A student who wishes to enroll in a course at one of these institutions should consult with the instructor in the particular course and should expect to satisfy the prerequisites and requirements normally required for admission to the course, including adherence to the academic calendar of that course.

A student at Brandeis University who wishes to enroll in a graduate course at one of the host institutions should obtain a registration permit from the Office of the University Registrar and should present this permit to the Office of the University Registrar of the host institution

Economics

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See International Economics and Finance

English and American Literature

Objectives

The graduate program in English and American literature is designed to offer training in the interpretation and evaluation of literary texts with some attention to related scholarly disciplines.

Admission

Candidates for admission should have a bachelor's degree, preferably with a major in English and American literature, and a reading knowledge of French, Italian, German, Greek or Latin. They are required to submit a sample of their critical writing not to exceed 35 pages; the 35-page maximum may consist of a single critical essay or two shorter essays of approximately equal length. Students are also required to submit scores on the Graduate Record Examination Verbal Aptitude test. The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to this area of study.

Faculty

Professor
Eugene Goodheart
Chair:
Nineteenth- and
twentieth-century
literature and
thought. Literary
theory.

Professor
Michael T.
Gilmore:
Puritanism.
Literature of the
American
Revolution.
American
Renaissance.

Professor Susan Staves: Restoration and eighteenth century.

Visiting Fannie Hurst Professor Olga Broumas: Poetry. Associate Professor John Burt: American literature. Romanticism. Composition. Philosophy of

Associate Professor William Flesch: Renaissance. Romanticism. Theory.

education.

Associate Professor Anne Janowitz Director of Graduate Studies: Romantic and modern poetry. Film. Cultural studies. Associate Professor Karen W. Klein: Medieval literature. Women's studies.

Associate Professor Alan Levitan: Shakespeare. Renaissance poetry and drama. Music and poetry. Classical oriental drama.

Associate Professor Richard J. Onorato: Modern literature. Film.

Associate Professor Gary Taylor: Renaissance literature. Visiting Fannie Hurst Associate Professor Jayne Anne Phillips: Fiction.

Assistant Professor Mary Campbell: Medieval literature. Poetry. Renaissance literature.

Assistant Professor Paul Morrison: Renaissance, Romantic and modern poetry. Literary theory.

Assistant Professor Jennifer Otsuki: Nineteenth-century literature. Poet-in-Residence Frank Bidart: Poetry.

Writer-in-Residence Geoffrey Wolff: Fiction.

Degree Requirements

Following are the degree requirements for the program of English and American Literature. Students should also consult the General Degree Requirements and Academic Regulations found in an earlier section of this catalog.

Master of Arts

Program of Study.

First-year students are normally expected to take 100-level courses and graduate seminars in the English program, not independent study courses. Each student will take English 200a; in addition, a normal program will consist of five courses, at least three of which will be 200-level seminars. Students must also register for English 295b (Major Text Examination).

Residence Requirement.

Language Requirement. The minimum residence requirement is one year, though students with inadequate preparation may require more.

A reading knowledge of a major foreign language (normally modern European or classical Greek or Latin) must be demonstrated by passing a written translation examination. The completion of the language requirement at another university does not exempt the student from the Brandeis requirement.

Qualifying Examination.

An examination, oral and written, will be given by committees of faculty members at the beginning of the spring term on one of several major texts, the texts to be announced at the end of the fall term. This examination will test a student's ability to read and understand a major literary work or a group of short works by the same author. Admission to the Ph.D. program, in addition to qualification for the M.A. degree, will depend upon the results of this examination and upon the student's performance in courses.

Doctor of Philosophy

Admission to the Ph.D. Program.

(1) Students who complete, with distinction, the M.A. requirements at Brandeis University are admitted to the Ph.D. program upon recommendation of the Committee on Graduate Studies.

(2) Students who enter with a master's degree or a full year of graduate work in English from another university are required to fulfill the qualifying examination requirement described above under the Master of Arts Program. Provided this requirement is fulfilled, such students may, at the program's discretion, be admitted to the Ph.D. program after successful completion of a year at Brandeis and upon recommendation by the Committee on Graduate Studies. At the time of admission, up to a year's residence and course credit for work completed elsewhere may be granted.

Program of Study.

Second-year students continue to take courses, usually two each term. Students have an obligation to review their preparation in the field with their advisors and to ensure that they are acquiring both a comprehensive knowledge of the various historical periods and genres of English and American literature and a deeper knowledge of the particular period or field they propose to offer as a specialty. With the exception of ENG 200, no specific courses are required of all Brandeis Ph.D. candidates; each student's program will be designed in light of the strengths and weaknesses of his or her previous preparation and in accord with his or her own interests.

A student who comes to Brandeis with a B.A. is required to take 12 courses for the Ph.D.; a student who comes with an M.A. is normally required to take eight courses at Brandeis.

Dissertation Field Examination.

All candidates for the Ph.D. will be asked to pass an oral examination in the historical period or genre in which the candidate expects to write a dissertation. This examination is taken in the third year. The examination may be taken as many times as necessary without prejudice to a student's standing in the Ph.D. program.

Residence Requirement.

The minimum residence requirement is one year beyond the master's degree or two years beyond the bachelor's.

Other Requirements.

Language Requirement.

In addition to the language requirement that has been met for admission to the Ph.D. program, the student must (1) demonstrate a reading knowledge of a second major foreign language; or (2) demonstrate an advanced competence in the first foreign language and a knowledge of its literature; or (3) take a graduate course, ordinarily a seminar, in a field closely related to research on the dissertation. Approval of the graduate committee must be sought before such a course is taken; the student must demonstrate the relevance of the proposed course to the dissertation.

Training in Teaching.

Provided openings exist, students in their second, third and fourth year in the program can expect to be awarded at least one teaching assistantship each year, if their academic work is of high caliber.

Admission to Candidacy.

A student will be considered by the program for admission to candidacy for the Ph.D. degree after completing the program of study and satisfying all program requirements prior to the writing and defense of a dissertation. A student admitted to candidacy must have submitted a formal dissertation proposal, subject to approval by the student's dissertation director and by an additional member of the program faculty.

Dissertation and Defense.

Each student will submit a dissertation in a form approved by his/her dissertation director and by a committee appointed by the director of graduate studies. The student will defend the dissertation at a Final Oral Examination. The dissertation may be a monograph, a series of closely related essays, a bibliographical project or a textual project.

Courses of Instruction

Courses of mistr	исноп		
English 100b. (Formerly ENG 10b.) Poetry: A Basic Course	Designed as a "first" course for all persons interested in the subject. It is intended to be basic without being elementary. The subject matter consists of poems of short and middle length in English from the earliest period to the present. Usually offered in odd years. Staff	English 115b. Women, Realism and Melodrama	Focuses on two frequently opposed traditions in 19th-century British literature — realism and melodrama — and at the tensions between them embodied in novels, plays and paintings of the period. We look at the linked figures of the actress and heroine as they represent the two traditions. Usually offered every third year. Last offered Spring 1990.
English 106a. Early American Best-sellers	A study of some of the most popular American books written before the Civil War. Among other topics, we explore the changing preferences of the reading public; the relation between popular and "elite" taste and the cultural function of the best-seller. Usually offered in odd years. Mr. Gilmore	English 116b. (AÂAS 113b.) Eighteenth- and Nineteenth- Century Afro-American Literature	Addresses the history of Afro-American literature from its mid-18th-century beginnings through the post-Civil War Reconstruction of the late 19th century. We examine transcriptions of oral folk productions, slave narratives, autobiography, essays, poetry and prose fiction.
English 110a. Film Narrative I: A Survey of Early Film Classics 1915-1950s	The primary object of this course is film literacy, not just film history — an understanding and critical appreciation of film as a major modern form of narrative. To that end, film is studied in its evolving technical complexity as a wholly modern kind of text. Usually offered in even years.	Jewish Communal Service 117b. Modern Jewish American Writers	Usually offered in odd years. Staff See JCS 117b for description. Usually offered in odd years. Ms. Fishman
English 110b. Film Narrative II: Contemporary Film 1950s-1980s	Mr. Onorato Requires competence in basic matters of film technique and assumes adequate knowledge of earlier film. The films for study are drawn from the contemporary period — from the late 1950s to the present. Special attention given to the cultural and political significance of the film medium.	English 118b. (COML 107b.) European Modernism: The Age of Irony	See COML 107b for course description. Usually offered in odd years. Mr. Engelberg The narrative techniques of prose fiction and conventions of dware are basely accounted to
English 115a. Totalization and the Other: Images of Race and Gender in the	Usually offered in even years. Mr. Onorato An examination of how ideological control of the novel is played out as the struggle between normative and transgressive images of the community. Authors include Thackery, Collins, Forster, Caskell, Oliphant and	Film Fiction	conventions of drama are briefly reviewed to see how they gave rise to and continuously inform the fiction film. To see how point of view, characterization, narrative continuity and other elements of cinematic style are created through film technique, several kinds of films are close-viewed and studied. Usually offered in odd years. Mr. Onorato
Victorian Novel	Trollope. Usually offered every third year. Will be offered Spring 1992. Ms. Otsuki	English 120b. Shakespeare Off-shoots	The cultural and ideological transformations and adaptations of Shakespearean material from the late 17th century to the present. Usually offered every fourth year. Last offered Spring 1991. Mr. Levitan

59	English and American Literature		
English 121b. Contemporary Literary Theory	A broad consideration of recent issues and trends in literary theory, primarily formalist, structuralist, psychoanalytic, poststructuralist, feminist and Marxist. Recommended preparation: a course in the history of criticism.	English 126a. American Realism and Naturalism 1865-1900	The course's concern is how some of the central American realists and naturalists set about representing and analyzing American social and political life. Topics include the changing status of individuals, classes and genders, among others.
	Usually offered in odd years.		Usually offered every third year.
	Mr. Morrison		Last offered Fall 1989.
			Mr. Burt
English 122a. The Medieval World: Britain Before the Conquest	An introduction to the language and literature of the Anglo-Saxons. Attention given to modes of oral narration, with cross-cultural examples. Readings may include selections from Bede, The Chronicle, charms, riddles, the major extant short poems and the epic poem Beowulf.	English 127a. Joyce and Lawrence	A study of the major works of the two great antithetic novelists of the modern period. Usually offered every year.
	Usually offered every year.		Last offered Spring 1989 as ENG 107b.
	Ms. Klein		Mr. Goodheart
English 122b. The Medieval World: England from the Conquest to the Renaissance	A cultural study of this period with particular attention to the idealized fantasies, centering on the figure of Arthur, of the aristocratic class; the yoking of literary energies to intense religiosity; and the emergence of a literature reflective of wider urban and social realities.	English 127b. Contemporary Fiction and the "Post-Modernist" Novel	Against the background of the "modernism" of the earlier 20th century, this course considers aspects of contemporary fiction, such as the assimilation of earlier experimental techniques, the further liberalization of subject matter and attempts at continuing avant-gardism in what is called the "Post-Modernist" novel.
	Usually offered every fourth year.		Usually offered every year.
	Ms. Klein		Mr. Onorato
English 125a. Romanticism I: Blake, Wordsworth and Coleridge	This course may not be repeated for credit by students who have taken ENG 135b in previous years. We read the major poetry and some prose by the first generation of English Romantic poets. Our purpose is both to define the common ground of the Romantics' poetic, philosophical and political goals and determine the singularity of each writer's achievement.	English 131b. Writing in the "Wild Zone": Charting Feminist Literary Theory	Looks at the contributions of various theories to the feminist project and examines, in turn, what feminism can suggest to Marxists, Freudians, deconstructionists and others. Usually offered in even years. Staff
	Usually offered in even years.	English 132b. Chaucer I	May not be repeated for credit by students who have successfully completed ENG 122b Spring 1988.
English 125b. Romanticism II: Byron, Shelley and Keats	Ms. Janowitz This course may not be repeated for credit by students who have taken ENG 135b in previous years. ENG 125a, Romanticism I, is not a prerequisite for this course. The "younger generation" of Romantic poets, Byron, Shelley and Keats, both continue and react against the poetic, political and philosophical preoccupations and positions of their immediate elders. We read their major works, as well as Mary Shelley's Frankenstein.		In addition to reading Chaucer's major works we pay special attention to situating them in relation to linguistic, literary and social developments of the later Middle Ages. No previous knowledge of Middle English required. Usually offered every fourth year. Last offered Spring 1991. Ms. Campbell
	Usually offered in even years. Ms. Janowitz	English 135a. Nineteenth- Century Poetry	Explores the variety of forms, themes and structures in 19th-century British poetry. We look at poems considered to be Romantic, Victorian and Symbolist, as well as poetry of social intervention, nationalist poetry and domestic poetry.
			Usually offered in even years.

60 Eng	glish and American Literature		
English 135b. Romanticism	Major poetic texts by Blake, Wordsworth, Coleridge, Keats, Shelley and Byron, among others. Our purpose is both to define the common ground of the Romantics' poetic, political and philosophic goals and determine the singularity of each writer's achievement. Usually offered every other year. Ms. Janowitz	English 143b, Poetry and Music	An examination of the changing relationships of English music to English words from the 12th century to the present, with special concentration on Renaissance and 20th-century texts. Early texts are studied in modern settings, as well as in settings contemporaneous with them. Some genres to be covered are the carol, the air, the madrigal the oratorio, opera and 20th-century art-song Usually offered every fourth year.
English 137a. Yeats, Rilke and Freud	This course may be taken for credit by students who have taken ENG 137a in previous years.		Will be offered Fall 1991. Mr. Levitan
	An intensive reading of two modern poets in light of the Freudian description of mind. Attends with particular care to Freud's theory of dreams and its relationship to the use and value of dreams in the practice of poets.	English 147a. Six Twentieth- Century Poets	We study six poets: J.V. Cunningham, Elizabeth Bishop, Louise Bogen, Thom Gunn Philip Larkin and Seamus Heaney. Usually offered in odd years.
	Usually offered every fourth year. Last offered Spring 1991.		Staff
	Staff	English 147b. Modern British	The emphasis is on the American realistic tradition—including O'Neill, Williams,
English 137b. Studies in Modernism	An attempt to explore the concept of "modernism" through an intensive reading of seminal poems, novels and plays. Focuses on the formal innovations of modernism and their relation to various ideological and political issues. Usually offered in even years.	and other contemporary British	comparisons are made to Pinter, Stoppard and other contemporary British dramatists. Usually offered every fourth year. Last offered Spring 1989.
English 142b. Chaucer II: "Love" and the Early Chaucer	Mr. Morrison In this course we read Chaucer's dream poems, as well as his "verse novel," <i>Troilus and Criseyde</i> . Particular attention paid to Chaucer's innovative uses of Love as both a topic and formal structuring device for the	English 152b. Arthurian Literature	A survey of (mostly) medieval treatments of the legendary material associated with the British king Arthur and his court, in several genres: bardic poetry, history, romance and prose narrative. Usually offered in odd years.
	analysis of social conflict. No previous knowledge of Middle English required.		Ms. Campbell
	Usually offered every third year. Ms. Campbell	English 153a. Poetry, Philosophy and	We attempt to chart and correlate the change in the way people in England reflected upon what it meant to be human, and what it
English 143a. Elizabethan and Jacobean Drama	A study of the Revenge tradition in the work of Shakespeare and his contemporaries. The problem of blood revenge is looked at as an historical phenomenon in Renaissance society and as a social threat transformed into art in such dramatists as Shakespeare, Marlowe, Kyd, Marston, Tourneur, Chapman and	Politics in the Seventeenth Century	meant to be English and how these changes were mirrored in the literature, politics and philosophical writings of the time. Usually offered in even years. Mr. Taylor
	Webster. Usually offered every year.	English 155a. Jane Austen, Charlotte Brontë and George Eliot	This course may be taken for credit by students who have taken ENG 155a in previous years.
	Mr. Levitan	and deorge Enot	Provides an opportunity for intensive study of novels by these three major writers and deals with some biographical and critical material

61	English and American Literature		
English 157a. The Post-Modern Generation: Contemporary Poetry	An introduction to recent poetry in English, dealing with a wide range of poets as well as striking and significant departures from the poetry of the past. We look, where possible, at individual volumes by representative authors. Usually offered every year. Mr. Bidart	English 174b. Eighteenth- Century Novel	The early development in English, with particular attention to contemporary theories of the novel and the relationship between the literary genre and the social history of class. Authors include Smollett, Richardson, Fielding, Sterne and Burney. Usually offered every year. Ms. Staves
English 163a. Renaissance Poetry	We are concerned primarily with the kind of lyric first written by Wyatt, and evolved and extended by Sidney, Spenser and Shakespeare (particularly the sonnets); and with its sometimes surprising variations in the work of 17th-century poets. Usually offered in even years. Mr. Levitan	English 175a. (COML 174a.) Sex, Class and Literature in Europe: 1830-1914	See COML 174a for course description. Usually offered in odd years. Ms. Harth Readings include Moby Dick, The Narrative
English 164b. (THA 165b) Restoration and Eighteenth- Century Drama	Comedy, heroic drama, tragedy and bourgeois drama between 1660 and 1800, including Dryden, Wycherly, Coldsmith and Sheridan. Attention to the history of the plays in performance. Usually offered in odd years. Ms. Staves	Hawthorne, Melville and Poe English 177a.	of Arthur Gordon Pym, The Scarlet Letter and The Marble Faun, as well as short novels by all three authors. Usually offered every fourth year. Will be offered Spring 1992. Mr. Burt This course may not be repeated for credit by
English 167a. Fiction and the Anti-hero	Deals with the representation in 20th-century fiction, mainly American, of what has been called the anti-hero, a protagonist figure with limited or thwarted hopes and ambitions who often acts out or reacts against the role of social victim. Usually offered every third year. Last offered Fall 1990. Staff	American Gothie and American Romance	students who have taken ENG 176a in previous years. Examines Cothic fiction as a method of exploring the capacities of the imagination, disclosing its power and meeting its threat. Beginning with the 19th-century founders of the genre in America, the second half of the course deals with some 20th-century masters. Usually offered in even years. Mr. Burt
English 171a. (Formerly ENG 71a.) History of Literary Criticism	This course may not be repeated for credit by students who have taken ENG 71a in previous years. Explores major documents in the history of criticism from Plato to the present. Texts are read as both representative moments in the history of criticism and as documents of self-sufficient literary and intellectual interest. Usually offered every third year. Last offered Spring 1988.	English 177b. Contemporary Writers	We study writers whose major work has been done after the Second World War. Each text is looked at in the literary context of the post-modern novel, the political context of emerging voices of women and minorities and the social context of mass media, which are predominantly visual. Usually offered in odd years. Ms. Klein and Mr. Onorato
English 173a. Spenser and Milton	Mr. Morrison A course on poetic authority: the poetry of authority and the authority of poetry. Spenser and Milton are treated individually, but the era they bound is examined in terms of the tensions within and between their works. Usually offered in odd years. Mr. Flesch	English 178a. (COML 164a.) Family Portraits: The Orphaned Self	See COML 164a for description. Usually offered in odd years. Mr. Engelberg

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62 Eng	glish and American Literature		
English 180a. The Modern American Short Story	Close study on American short fiction masterworks. We read as writers write, discussing solutions to narrative obstacles and examining the consequences of alternate points of view; we study words and syntax to understand and articulate how technical decisions have moral and emotional weight. Usually offered every year. Mr. Wolff	English 220a. Prose Fiction, Film Fiction, Film Criticism	Assuming a broad knowledge of the narrative techniques of prose fiction, we consider the development of film technique for creating the narratives of film fiction. A variety of films are studied including adaptations, films that make a free use or transformation of an earlier text and films that were written directly for the screen. Relevant criticism and theory are read. Usually offered every third year. Mr. Onorato
English 185a. (COML 185a.) Dickens and Dostoevsky	See COML 185a for course description. Usually offered in even years. Ms. Miller	English 222b. The "Modernist" Novel: Virginia Woolf	This seminar undertakes a close study of Virginia Woolf in an attempt to see her in the literary context of modernism and the literary/political context of feminism. The works of fiction are emphasized but are read in the personal context of her other prose
English 187a. The "Modernist" Novel in English	A course in the major novelists of the early 20th century, stressing their experiments with narrative technique, subject matter and prose that resulted in the distinctly 20th-century sense of the modern in fiction known generally as "modernism." Usually offered in odd years.		writings and criticism, her journals and letters Usually offered every third year. Mr. Onorato
English 197b.	Mr. Onorato Defining politics as strategies of power, we	English 232b. Chaucer	A survey of the historically pivotal literary career of Chaucer, with emphasis on <i>The</i> <i>Canterbury Tales</i> . Chaucer's works as social analysis and critique, from the point of view of a bourgeois outsider in an aristocratic
The Political Novel in the Twentieth Century	look at these strategies in sexual, racial, economic and ideological terms as they are represented in primarily British and American novels of the 20th century. We focus on literary responses to various political and economic systems and the literary depictions	transformation into vehicles of sensibility; medieval relations o literature to its audience(s); ora and the book.	milieu; Chaucer's medieval genres and their transformation into vehicles of early modern sensibility; medieval relations of secular literature to its audience(s); orality, literacy and the book. Usually offered every third year.
	of the body in public and institutional spaces. Usually offered every year.		Ms. Campbell
	Ms. Klein	English 233a. Shakespeare	An intensive reading of Shakespearean tragedy from a theoretical and historical viewpoint.
Seminars			Usually offered every third year.
English 200a. Methods of Literary Study	A partial introduction to what professional critics do with texts. Sample texts are taken from the second most important dramatist in		Mr. Flesch
	English, Thomas Middleton. Using Middleton as a target and ammunition, we argue about the construction of texts, authors, canons, characters, narratives, genders, genres, classes, states, souls and other fictions. Required of all first-year students.	Blake and Wordsworth and poetic events. Wordsworth the 1790s produced the materic his retrospective poetry, and Bl work is born out of the struggle We formulate general propositi relationship between poetry and take Wordsworth and Blake as	An investigation of Romantic poetry in its relationship to contemporary political, social and poetic events. Wordsworth's experience is the 1790s produced the materials for much chis retrospective poetry, and Blake's prophet work is born out of the struggles of the period.
	Usually offered every year. Mr. Taylor		we formulate general propositions about the relationship between poetry and history as w take Wordsworth and Blake as both idiosyncratic and exemplary historical poets.
			Usually offered every third year.
			Ms. Janowitz

The Ethics of Representation in Nineteenth- and Twentieth-Century Fiction Representation in Nineteenth- and Twentieth-Century Fiction Reading in (primarily) English genres of the period of discovery and colonial extoration and Empire Reading in (primarily) English genres of the period of discovery and colonial extoration of Information and Empire Reading in (primarily) English genres of the period of discovery and colonial extoration: Brights 242a. Reading in (primarily) English genres of the period of discovery and colonial extoration: Brights 242a. Reading in (primarily) English genres of the period of discovery and colonial extoration: Brights 242a. Reading in (primarily) English genres of the period of discovery and colonial extoration: Brights 242a. Reading in (primarily) English genres of the period of discovery and colonial extoration: Brights 242a. Reading in (primarily) English genres of the period of discovery and colonial extoration: Brights 242a. Reading in (primarily) English genres of the period of discovery and colonial extoration: Brights 242a. Reading in (primarily) English genres of the period of discovery and colonial extoration: Brights 242a. Reading in (primarily) English genres of the period of discovery and colonial extoration: Brights 242a. Reading in (primarily) English genres of the period of discovery and colonial extoration: Brights 242a. Reading in (primarily) English genres of the period of discovery and colonial extoration: Brights 242a. Reading in (primarily) English genres of the period of discovery and colonial extoration: Brights 242a. Reading in (primarily) English genres of the period of discovery and deviation: Brights 242a. Reading in (primarily) English genres of the period of discovery and deviation: Brights 242a. Reading in (primarily) English genres of the period of discovery and deviation: Brights 242a. Reading in (primarily) English genres of the period of discovery and deviation: Brights 242a. Reading in (primarily) English genres	63	English and American Literature		
English 240a. Sex and Culture English 240a. Sex and Culture Studies in the cultural construction and representation of the self and its sexuality, we focus primarily on the various technologies of and otherwise) in the modern West. English 240b. The Chites of Representation in Niteteaths and two currents of the cultural construction in Niteteaths and two currents of the cultural construction in Niteteaths and two currents of the cultural construction in Niteteaths and two currents of the cultural construction in Niteteaths and two currents of the cultural construction of the cultural construction of the self and its sexuality, we focus primarily on the various technologies of and otherwise) in the modern West. English 240b. English 240b. The Chites of Representation in Niteteaths and two currents of the cultural construction in Niteteaths and two currents of the cultural construction of the cultura	Theories of the	the novel, including selections from the works of Aristotle, James, Lubbock, Auerbach, Watt, Booth, Barthes, Genette, Lukacs, Bakhtin and recent feminist theory. We also	Feminist Theory and Victorian	
representation of the self and its sexuality; we focus primarily on the various technologies of self-knowledge and self-fashioning (literary and otherwise) in the modern West. Usually offered every third year. Mr. Morrison English 240b. The Ethics of Representation in Nineteenth- and Representation in Nineteenth- and Twentieth-Century Fiction, we study the ways in which narrative construction (plotting retoric, narrative voice, ideological motivation) represent personal and social reality. We raise questions about the relationship between the real and the ethical, between what is and what ought to be and how our own ethical concents completed our understanding of the novels we read. Usually offered every third year. Mr. Coodheart English 242a. Early Modern Literatures of Information and Empire English 242a. Early Modern Columba and Empire English 242a. Early Modern Literatures of Information and Empire English 255a. Collutral Materialism and British Romanticism Combines theoretical and critical practices by investigating Momantie poetic texts in the light of recent movements in historical and British Romanticism Columbus, More, Spenser, Montaigne, Shakespeare, Bacon, Godwin, Cyrano de Bergerae, Bowne, Fontanelle, Cavendish, Behn, Dampier, Purchas, Defoe, Swift, Lafitau and Linuacus. Usually offered every third year. Ms. Campbell Combines theoretical and critical practices by investigating Momantie poetic texts in the light of recent movements in historical and British Romanticism Columbus And Linuacus. Usually offered every third year. Ms. Campbell Combines theoretical and critical practices by investigating Momantie poetic texts in the light of recent movements in historical and materialistic thought. We begin by reading in the tradition of Western Maxism and the took of the West Historicists and Columba Materialism and British Romanticism Combines theoretical and critical practices by investigating Momantie poetic texts in the light of recent movements in historical and materialistic thoug		perspectives developed in the course. Usually offered every third year.	American Romantic Fiction: Precursors and	Romanticism in the American novel. Authors to be considered include: Charles Brockden Brown, Washington Irving, James Fenimore Cooper, Nathaniel Hawthorne and Herman
Usually offered every third year. Mr. Morrison English 240b. English 240b. English 240b. English 26 different Century English 26 different Century English 26 different Century English 26 different Century English 27 different Century English 26 different Century English 26 different Century English 27 different Century English 26 different Century English 26 different Century English 27 different Century English 27 different Century English 27 different Century English 27 different Century English 28 different Century English 29 different Century En		representation of the self and its sexuality; we focus primarily on the various technologies of self-knowledge and self-fashioning (literary		
English 242a. English 242a. English 242a. Early Modern Information and Empire English 242a. Early Modern Collural materialistic and Empire English 242a. Early Modern Collural Sheprese, Browne, Fontanelle, Cavendish, Behn, Dampier, Parchas, Defoe, Swift, Latitua and Lituraeus. Usually offered every third year. English 245a. Collural Materialism and British Romanticism Examining exemplary works of 19th- and divention in Optocome teat stand with ideology of marriage it promotes. Usually offered every third year. English 250b. Historical and Theoretical Introduction to Modern English 250b. Historical and Theoretical Introduction to Modern English Private and Practice of Allegory English 245a. Collural Materialism and British Romantic poetic texts in the light of recent movements in historical and Practice of Jacob Romantic poetic texts in the light of recent movements in historical and Practice of Jacob Romantic poetic texts in the light of recent movements in historical and Practice of Jacob Romantic poetic texts in the light of recent movements in historical and Practice of Jacob Romantic poetic texts in the light of recent movements in historical and Practice of Jacob Romantic poetic texts in the light of recent movements in historical and Practice of Jacob Romantic poetic texts in the look at its heirs and opponents in the work of those New Historicists and Cultural Materialistic thought. We begin by reading in the tradition of Western Marxism and the look at its heirs and opponents in the work of those New Historicists and Cultural Materialistic thought. We begin by reading in the tradition of		Usually offered every third year.	Representations of Eighteenth- Century Marriage: Literary Texts,	representations of marriage, each of which has been thought to make some claim to being a "realistic" representation. Sources include legal documents, medical treatises,
Fiction reality. We raise questions about the relationship between what is and what ought to be and how our own ethical concerns complicate our understanding of the novels we read. Usually offered every third year. Mr. Goodheart English 242a. Early Modern Literatures of Information and Empire English 242b. Collareally an overview of the methods and assumptions of intellectual history in its "new historicist" and "cultural materialistis" avatars. Columbus, More, Spenser, Montaigne, Shakespeare, Bacon, Godwin, Cyrano de Bergerac, Browne, Fontanelle, Cavendish, Behn, Dampier, Purchas, Defoe, Swift, Lafitau and Limnaeus. Usually offered every third year. English 245a. Cultural Materialism and British Romantieism English 245a. Cultural Materialism and British Romantieism Mr. Staves Mr. Heistory of English versification from Wyatu ton is the history of the theory of versification to Modern English Versifi	The Ethics of Representation in Nineteenth- and	20th-century fiction, we study the ways in which narrative construction (plotting, rhetoric, narrative voice, ideological		drama and novels. We concern ourselves with the apparent social function of each text and with ideology of marriage it promotes.
understanding of the novels we read. Usually offered every third year. Mr. Goodheart Reading in (primarily) English genres of the period of discovery and colonial extoration: "births" of Uiopia, anthropology, science fortion and the novel; relations of science to prose fiction and sensational genres. Collaterally an overview of the methods and assumptions of intellectual history in its "new historicis" and "cultural materialist" avatars. Columbus, More, Spenser, Montaigne, Shakespeare, Bacon, Godwin, Cyrano de Bergerac, Browne, Fontanelle, Cavendish, Behn, Dampier, Purchas, Defoe, Swift, Laftau and Linnaeus. Usually offered every third year. Ms. Campbell English 245a. Cultural Materialism and British Romanticism Collateralls was and derivation of the work of those New Historicists and Cultural Materialists who have addressed Romantic poets. Usually offered every third year. Ms. Janowitz English 260a. The Language of the history of English versification from Howard Theoretical Introduction to Modern English Versification Theoretical and Theoretical Introduction to Modern English Versification Theoretical Introduction to Modern English Versification The introduction to Modern English Versification. This course studies both, asking what rhyme and meter are, and what their connection to poetic meaning is. We consider the answers given by poets from Wyatt through Ashbery and Merrill and theorists from Spenser and Milton through Freud. English 260a. The Language of the Cherr The Theory and Practice of Allegory A seminar on the theory and practice of allegorical Interature; we focus primarily on English 260a. The Language of the Cherr The Theory and Practice of Allegory A seminar on the theory and practice of Allegory A seminar on the theory of English 260a. The Language of the Cherr The Theory and Practice of Allegory A seminar on the theory and practice of		reality. We raise questions about the relationship between the real and the ethical, between what is and what ought to be and		
English 242a. Early Modern Literatures of Information and Empire Reading in (primarily) English genres of the period of discovery and colonial exloration: "births" of Utopia, anthropology, science fiction and the novel; relations of science to prose fiction and sensational genres. Collaterally an overview of the methods and assumptions of intellectual history in its "new historicist" and "cultural materialist" avatars. Columbus, More, Spenser, Montaigne, Shakespeare, Bacon, Codwin, Cyrano de Bergerac, Browne, Fontanelle, Cavendish, Behn, Dampier, Purchas, Defoe, Swift, Lafitau and Linnaeus. Usually offered every third year. Ms. Campbell English 245a. Colltural Materialism and British Romanticism Combines theoretical and critical practices by investigating Romantic poetic texts in the light of recent movements in historical and materialistic thought. We begin by reading in the tradition of Western Marxism and then load at its heirs and opponents in the work of those New Historicists and Cultural Materialists who have addressed Romantic poets. Usually offered every third year. Ms. Janowitz Reading in (primarily) English genres of the Empson and Easthope. Usually offered in even years. Mr. Flesch A seminar on the theory and practice of allegorical literature; we focus primarily on Spenser's Facrie Queene, although we read Practice of Allegory Allegory A seminar on the theory and practice of allegorical literature; we focus primarily on Spenser's Facrie Queene, although we read Practice of Allegory A seminar on the theory and practice of allegorical literature; we focus primarily on Spenser's Facrie Queene, although we read Practice of Allegory A seminar on the theory and practice of allegorical literature; we focus primarily on Spenser's Facrie Queene, although we read Practice of Allegory The Language of the Other The Theory and Practice of Allegory A seminar on the theory and Practice of Allegory Fine Language of the Other The Theory and Practice of Allegory Fine Language of the Other The Theo		understanding of the novels we read. Usually offered every third year.	Historical and Theoretical Introduction to Modern English	Wyati on is the history of the theory of versification. This course studies both, asking what rhyme and meter are, and what their connection to poetic meaning is. We consider the answers given by poets from Wyatt through Ashbery and Merrill and theorists
Collaterally an overview of the methods and assumptions of intellectual history in its "new historicist" and "cultural materialist" avatars. Columbus, More, Spenser, Montaigne, Shakespeare, Bacon, Codwin, Cyrano de Bergerac, Browne, Fontanelle, Cavendish, Behn, Dampier, Purchas, Defoe, Swift, Lafitau and Linnaeus. Usually offered every third year. Ms. Campbell Combines theoretical and critical practices by investigating Romantic poetic texts in the light of recent movements in historical and materialistic thought. We begin by reading in the tradition of Western Marxism and then look at its heirs and opponents in the work of those New Historicists and Cultural Materialists who have addressed Romantic poets. Usually offered every third year. Ms. Janowitz Mr. Flesch A seminar on the theory and practice of allegorical literature; we focus primarily on Spenser's Faerie Queene, although we read broadly in allegorical and quasi-allegorical literature; we focus primarily on Spenser's Faerie Queene, although we read Practice of Allegory A seminar on the theory and practice of allegorical literature; we focus primarily on Spenser's Faerie Queene, although we read Practice of Allegory A seminar on the theory and practice of allegorical interature; we focus primarily on Spenser's Faerie Queene, although we read Practice of Allegory A seminar on the theory and practice of allegorical interature; we focus primarily on Spenser's Faerie Queene, although we read Practice of Allegory A seminar on the theory and practice of allegorical and quasi-allegorical and quas	Early Modern Literatures of	period of discovery and colonial exloration: "births" of Utopia, anthropology, science fiction and the novel; relations of science to		from Spenser and Milton through Freud, Empson and Easthope.
Shakespeare, Bacon, Godwin, Cyrano de Bergerac, Browne, Fontanelle, Cavendish, Behn, Dampier, Purchas, Defoe, Swift, Lafitau and Linnaeus. Usually offered every third year. Ms. Campbell English 245a. Cultural Materialism and British Romanticism Combines theoretical and critical practices by investigating Romantic poetic texts in the light of recent movements in historical and materialistic thought. We begin by reading in the tradition of Western Marxism and then look at its heirs and opponents in the work of those New Historicists and Cultural Materialists who have addressed Romantic poets. Usually offered every third year. Ws. Janowitz The Language of the Other: The Theory and Practice of Allegory The Language of the Other: The Theory and Practice of Allegory The Language of the Other: The Theory and Practice of Allegory Spenser's Faerie Queene, although we read broadly in allegorical literature; we focus primarily on Spenser's Faerie Queene, although we read broadly in allegorical and quasi-allegorical interature; we focus primarily on Spenser's Faerie Queene, although we read broadly in allegorical and quasi-allegorical interature; we focus primarily on Spenser's Faerie Queene, although we read broadly in allegorical and quasi-allegorical interature; we focus primarily on Spenser's Faerie Queene, although we read broadly in allegorical interature; we focus primarily on Spenser's Faerie Queene, although we read broadly in allegorical and quasi-allegorical interature; we focus primarily on Spenser's Faerie Queene, although we read broadly in allegorical interature; we focus primarily on Spenser's Faerie Queene, although we read broadly in allegorical interature; we focus primarily on Spenser's Faerie Queene, although we read broadly in allegorical interature; we focus primarily on Spenser's Faerie Queene, although we read broadly in allegorical interature; we focus primarily on the provide primary all provides primary primary primary primary primary primary primary primary primary premared and primar	Empire	Collaterally an overview of the methods and assumptions of intellectual history in its "new historicist" and "cultural materialist" avatars.		
Ms. Campbell Combines theoretical and critical practices by investigating Romantic poetic texts in the light of recent movements in historical and materialistic thought. We begin by reading in the tradition of Western Marxism and then look at its heirs and opponents in the work of those New Historicists and Cultural Materialists who have addressed Romantic poets. Usually offered every third year. Ms. Janowitz Usually offered every third year. Mr. Morrison A study of three major 18th-century comic writers with an emphasis on exploring some common ground among them including their complex uses of irony and sentiment, and considering their generic experiments. Amon the issues to be considered are the writers highly self-conscious relation to new developments in the early modern book trade. Ms. Janowitz Usually offered every third year. Lisually offered every third year.		Shakespeare, Bacon, Godwin, Cyrano de Bergerac, Browne, Fontanelle, Cavendish, Behn, Dampier, Purchas, Defoe, Swift, Lafitau and Linnaeus.	The Language of the Other: The Theory and Practice of	allegorical literature; we focus primarily on Spenser's Faerie Queene, although we read broadly in allegorical and quasi-allegorical literature (the Bible, allegorical rewritings or reinterpretations of Virgil and Ovid, Dante, Chaucer, Romantic poetry, 19th-century
English 245a. Cultural Materialism and British Romanticism Combines theoretical and critical practices by investigating Romantic poetic texts in the light of recent movements in historical and materialistic thought. We begin by reading in the tradition of Western Marxism and then look at its heirs and opponents in the work of those New Historicists and Cultural Materialists who have addressed Romantic poets. Usually offered every third year. Mr. Morrison Mr. Morrison A study of three major 18th-century comic writers with an emphasis on exploring some common ground among them including their complex uses of irony and sentiment, and considering their generic experiments. Amonthe issues to be considered are the writers' highly self-conscious relation to new developments in the early modern book trad		Ms. Campbell		
British Romanticism materialistic thought. We begin by reading in the tradition of Western Marxism and then look at its heirs and opponents in the work of those New Historicists and Cultural Materialists who have addressed Romantic poets. Usually offered every third year. Ms. Janowitz Materialistic thought. We begin by reading in the work of the reading in the work of those New Historicists and Cultural Materialists who have addressed Romantic poets. Usually offered every third year. A study of three major 18th-century comic writers with an emphasis on exploring some common ground among them including their considering their generic experiments. Amon the issues to be considered are the writers highly self-conscious relation to new developments in the early modern book trad	Cultural	investigating Romantic poetic texts in the		
Ms. Janowitz Usually offered every third year.	British	materialistic thought. We begin by reading in the tradition of Western Marxism and then look at its heirs and opponents in the work of those New Historicists and Cultural Materialists who have addressed Romantic poets.	Pope, Montagu	writers with an emphasis on exploring some common ground among them including their complex uses of irony and sentiment, and considering their generic experiments. Among the issues to be considered are the writers' highly self-conscious relation to new
The state of the s				
		vis. Janowitz		

64 Eng	rlish and American Literature		
English 266b. Class in American Literature	Does class have a place in discussion of American literature? Class emerges as a category in English novels of the 19th century, but its significance in American fiction seems far more problematic. Do American writers uncritically endorse the national ideals of social mobility and classlessness? Do issues of gender and race mask concern for class? Readings include	English 299b. Pedagogy	Modern theories of pedagogy and composition with practical experience. Students are apprenticed to current instructors. Usually offered every year. Mr. Burt
	stories and novels by Poe, Hawthorne, Melville, Stowe and others. Usually offered every third year.	English 352a and b. Directed Research	Specific sections for individual faculty members as requested. Staff
	Mr. Gilmore	English 402d.	Specific sections for individual faculty
English 295b. Studies in a Major	Required of all first-year students.	Dissertation Research	members as requested.
Text	Offered every year.		Staff
	Mr. Levitan		
French			
See Joint Program of L	iterary Studies		
German			
See Joint Program of L	Literary Studies		

History

See Comparative History

History of American Civilization

Objectives

The graduate program in the history of American civilization, leading to the degree of Doctor of Philosophy in history, has been designed primarily to educate professional scholars and teachers of American history. The curriculum emphasizes both a comprehensive understanding of American history and the mastery of historical research and writing. For a comparative view of the American experience, students will undertake selective studies in modern European, Asian, Latin American or African history.

A small, select student body works closely with the faculty in independent reading and research courses. From the beginning, individual programs are developed to prepare students for their qualifying examinations and guide them toward their dissertation research. Normally, the first year's work is concentrated in American history, including substantial experience in directed research and a critical approach to problems of historiography Second-year students, while pursuing further directed research, chiefly are encouraged to choose courses to complete their preparation in the examination fields. Studies in related fields are arranged individually with appropriate members of the University's graduate faculty, either through standard courses or directed readings. For selected students with appropriate qualifications, there are opportunities for advanced study and research with distinguished scholars at neighboring universities in such fields as legal history and business history. Applicants should note with care the four parts of the examination, specified under Degree Requirements, in which all students are expected to demonstrate proficiency.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this program. An undergraduate major in history is the preferred preparation for admission, and the student's undergraduate curriculum should include some fundamental courses in American history and related fields in the social sciences or humanities. Students with the M.A. in history or a professional degree in law or other related fields are especially invited to apply. Students interested in Crown Fellowships or the special arrangements for study in professional fields at neighboring universities, noted above, should submit applications by March 1.

Faculty

Executive Committee and Staff Professor David Hackett Fischer Chair: Social and political structure. Early Republic. Professor
Jacqueline Jones:
Southern, labor,
African-American
and women's history.

Professor Morton Keller: Legal and political institutions. Modern America. Professor Sam Bass Warner: Urban and environmental history.

Professor Stephen Whitfield: Modern America. Cultural lustory. Associate Professor Joyce Antler: History of education. Gender and family history.

Associate Professor Gerald S. Bernstein: American art and architecture. Associate Professor James T. Kloppenberg: Intellectual and political history.

Assistant Professor Neil Kamil: Colonial America. Native American and White interaction. Material culture.

Degree Requirements

Master of Arts

Students who are admitted for a terminal M.A. degree must complete one full year of course work and the foreign language requirement. Courses will include the two-semester colloquium in American history, a major research project and four other courses approved by the Executive Committee.

Doctor of Philosophy

Program of Study.

Doctoral candidates must complete two years in residence at Brandeis and a minimum of 16 semester courses. Programs of study and concentration will be formulated for each student, subject to the approval of the Executive Committee. Students will be required to maintain an average of B- or better in order to continue in the program. Continuance of fellowship support requires an average of A- or better. Incoming students normally will be expected to take two term courses of Directed Research in American History in their first year of residence. The Committee may, at its discretion, grant a student transfer credit of up to one year toward the Ph.D. residence requirement for relevant graduate or professional work done elsewhere. Application for such credit shall be considered only after a student has completed one term's residence in a full-time program. The second 200-level Directed Research course may be waived by the Committee on the basis of a master's thesis or comparable research project at the graduate or professional level done elsewhere. In the first year all students enroll in the Colloquium in American History; in the second year, the Colloquium in Comparative History.

Language Requirement. A high level of reading proficiency in one foreign language is required of all students. Students are expected to pass the language examination during the first year of residence. A student who has not passed the foreign language examination by the end of the first year is not eligible for financial aid from the University for the second year. The completion of language requirements at another university does not exempt the candidate from the Brandeis requirement.

Qualifying Examination.

Each doctoral candidate must pass at the doctoral level a qualifying examination in the following four fields: (1) general American history, one examiner to be in early American history and the other in modern American history; (2) a period of specialization in American history; (3) an area of comparative modern European, Asian, Latin American or African history; (4) a related discipline in the social sciences or humanities or a subdiscipline in history. All proposed fields must be submitted in writing and approved by the Executive Committee. The period of specialization will normally be selected from the following: 1607-1763, 1763-1815, 1815-1877, 1877-1914, 1914-present. (5) The area in comparative history may focus on such themes as 19th-century emigration/immigration, 18th-century American and European political and social philosophy, the history of the modern family or the frontier in global perspective. The fourth field may involve training in politics, international relations or literature, for example, to provide perspectives and methods that can illuminate historical problems. Or it can involve a subdiscipline in history that has a distinctive subject matter and methodology, such as American social, legal, ecological or intellectual history. Students entering the program without previous graduate training in American history are expected to take the qualifying examination no later than the end of their fifth term of residence and must pass the examination by the end of the sixth term. Students who have earned an M.A. in history elsewhere, or who have one year of transfer credit for work taken elsewhere, are expected to take and pass the qualifying examination by the end of their second year in the program.

Unless the student elects a single three-hour oral examination on all four fields, the qualifying examinations will be taken separately in each of the fields, with the general American field coming at the end. For each of the fields (2), (3) and (4), as above, the student will choose one appropriate professor with the approval of the chair of the program. That professor, in consultation with the student, will define the requirements, course of preparation and mode of examination (written and/or oral) for the field.

For the general American field, the chair will appoint two members of the Executive Committee as examiners. The student may choose a one-hour oral examination or a three-hour written examination followed, if the examiners so require, by an oral examination. In either case, the two professors in consultation with the student will define in advance the major themes or problems on which the examination will be based. So far as possible, fields (3) and (4), as above, should be selected with a view to broadening and deepening the student's understanding of his/her American history fields and providing valuable background for the dissertation work.

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	With the consent of the chair and the professor concerned, qualified students in appropriate cases may be examined in fields (3) or (4), as above, by a faculty member at another university. Moreover, with the consent of the Executive Committee, examinations in fields (3) or (4), as above, may be waived for students with the M.A., J.D. or other advanced degrees that represent	Admission to Candidacy.	A student may be admitted to candidacy for the Ph.D. degree upon satisfactory completion of the following: course and residence requirements, demonstration of a high level of proficiency in one foreign language, the qualifying examinations and when a prospectus for a dissertation is approved by the Executive Committee.
	a level or kind of training and achievement fully equivalent to those required in the Harvard examinations for those fields.	Dissertation and Defense.	When the dissertation is accepted by the Committee, a Final Oral Examination will be scheduled at which the candidate must successfully defend his/her dissertation before the Committee and other members of the faculty who may participate.
Courses of Instru	action		
History 190a. Historiography	A critical analysis of classical historiography. Usually offered in odd years. Mr. Kapelle	201e. Topics in American Social and Women's History	Ms. Antler
History 198a. Colloquium in the History of	Usually offered every year.	202e. Topics in American Art and Architecture	Mr. Bernstein
American Civilization	Staff	203e. Topics in Social History with	
History 198b. Colloquium in the History of American Civilization	Usually offered every year. Mr. Keller	Emphasis on the Early Republic 204e. Topics in American Southern and	Mr. Fischer
History 199a. Colloquium in Early Modern Comparative	An introduction to the major issues and methods in the social history of Europe in the early modern and modern periods.	Women's History 205e. Topics in American	Ms. Jones
History	Usually offered every year. Mr. Cohn	Colonial History 206e. Topics in	Mr. Kamil
History 199b. Colloquium in European Comparative	Comparative examination of major historical issues in Europe from the 18th through the 20th centuries.	Modern America 207e. Topics in Intellectual	Mr. Keller
History Since the Eighteenth Century	Usually offered in even years. Mr. Schuker	History 208e. Topics in Urban History	Mr. Kloppenberg Mr. Warner
History 201e-209e. Directed Research in American History	Students will normally elect one of the following in the fall term of the first and the second years. Each is designed to provide experience in designing, researching and writing a substantial essay of a monographic character, based on extensive use of sources. This is the equivalent of a full course and extends the due date for the final draft of the paper to March 1, to pennit sufficient time for a major project. Specific research topics are selected by the student in consultation with the professor.	209e. Topics in Modern American Cultural History	Mr. Whitfield
	Offered every year.		

68	History of American Civilization		
History 301a or b. Readings in the History of American Civilization	Usually offered every term. Specific sections for individual faculty members as requested.	For courses available to history of American civilization students in other historical areas, see the listings by department and programs in the graduate and undergraduate catalogs, especially under comparative history.	
Avinzation	Staff	ln addition, the follow history of American civ	ing courses may be taken as equivalent to vilization seminars.
	es are offered on a regular basis to groups of o use them to prepare for their general	History 151b. The American Revolution	Usually offered in odd years. Mr. Fischer
History 311-319 a or b. Readings in the History of American Civilization	Offered every year.	History 152b. American Social and Cultural History Since the Civil War	Usually offered in odd years. Staff
311a or b. American Social and Women's History	Ms. Antler	History 153b. Slavery and the American Civil War	Usually offered every third year. Mr. Fischer
313a or b. American Social History, 1750-1850 314a or b. Labor, Southern	Mr. Fischer	History 155b. Women in American History, 1890 to the present	Usually offered every year.
and Women's History	Ms. Jones		Ms. Antler
315a or b. Colonial History, 1607-1750	Mr. Kamil	History 156a. American Social History, 1750-1860	Usually offered in even years. Mr. Fischer
B16a or b. Political History, 1870-present B17a or b. American	Mr. Keller	History 156b. American Social History, 1860-present	Offered every year. Ms. Jones
Intellectual History, 1870-present	Mr. Kloppenberg	History 157a. The Culture of the	Usually offered every year.
318a or b. American Urban History	Mr. Warner	Cold War	Mr. Whitfield
319a or b. American Cultural History	Mr. Whitfield	History 158a. Early Modern European and Anglo-American History	Offered every year. Mr. Kamil
History 401d. Dissertation Research	Offered every year. Specific sections for individual faculty	History 158b.	Offered every year.
	members as requested. Staff	Social History of the Confederate States of America	Ms. Jones
		History 160b. Topics in Colonial Native American History	Offered every year. Mr. Kamil
		History 161b. The American Polity	Usually offered in even years. Mr. Keller

69	History of American Civilization		
History 162a. Topics in American Intellectual History: From Liberal	Usually offered every year. Mr. Kloppenberg	History 188a. Material Life in Early America: Comparative and Multidisciplinary	Usually offered every year. Mr. Kamil
Democracy to Social Democracy		History 188b. Hidden Bonds of Womanhood:	Usually offered every year. Ms. Jones
History 163a. American Foreign Relations in the Twentieth Century	Usually offered in odd years. Mr. Schuker	Women in the South, 1865-1980	Ms. Jones
· · · · · · · · · · · · · · · · · · ·		History 191b.	Usually offered in odd years.
History 167b. Topics in American Legal	Usually offered in odd years. Mr. Keller	Psychohistory	Mr. Binion
History	Mr. Rener	History 194b. Politics and	Usually offered in odd years.
History 169a. Thought and	Usually offered every year.	——— Diplomacy in Europe	Mr. Schuker
Culture in	Mr. Kloppenberg		
Modern America		History 197b. Seminar in	Usually offered every third year.
		Comparative History: Divided Cities	Mr. Wasserstein

International Economics and Finance

Objectives

The Lemberg Program in International Economics and Finance offers an innovative master's degree for students planning careers in international economics, business and finance. Combining courses in financial aspects of management, international economics and international relations, the program offers advanced technical training in international economics and finance along with broad preparation in the political and cultural aspects of international economic relations. One term of study is spent at a foreign university affiliated with the program.

should include courses in intermediate microeconomics, statistics and international relations. Applicants should also have attained some proficiency in at least one major foreign language.

Financial Aid

The Lemberg Program provides many students with financial support, which may include tuition scholarships, fellowship stipends, research or teaching assistantships and institutional loans. Aid is based on both merit and need and is also available to foreign students. U.S. and Canadian applicants for aid must file a GAPSFAS form; foreign students must complete the financial aid form for foreign students which is part of the Lemberg Program application. The program requires parents' information for all dependent students, regardless of age, and all independent students under 24. Students who fail to provide parental information may jeopardize their consideration for institutional aid.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. Either GMAT or GRE scores are required. An undergraduate concentration in economics is not required, but applicants are expected to have a background in economics and related analytical subjects. Undergraduate work

Faculty

Professor
Peter A. Petri
Director, Lemberg
Program:
International trade.
Development.
Japan. Korea.

Professor Anne P. Carter: Technology progress. Technology transfer.

Professor F. Trenery Dolbear, Jr.: Macroeconomics. Theory and computer simulations.

Professor Robert Evans, Jr.: Japan. Labor. Economic history.

Professor Rachel McCulloch: International trade theory. Trade policy. Macroeconomic coordination. Investment and technology transfer. Professor Barney K. Schwalberg: Soviet economy. Labor. Education.

Professor Richard S. Weckstein: Development. Law and economics. International trade.

Visiting Professor Robert Z. Aliber: International finance. Multinational corporations. International investment and monetary economics. Adjunct Professor Michael Haselkorn: Accounting and finance.

Adjunct Professor Jane E. Hughes: Domestic and international cash management. Third world debt, sovereign risk and foreign exchange markets.

Adjunct Professor Robert L. Kuttner: Political economy and global interdependence.

Adjunct Professor Marc A. Miles: International monetary policy. Globalization of markets.

Adjunct Professor Peter L. Rathjens: Finance. Econometrics. Adjunct Professor H. David Sherman: Accounting and management control system design. Service productivity.

Adjunct Professor Allen Sinai: Macroeconomic forecasting. Econometric modelling. Business fluctuations.

Adjunct Professor Jack S. Wolf: International marketing strategy.

Associate Professor Gary H. Jefferson: China. Technical progress. Open economy macroeconomics.

Associate Professor Arthur Lewbel: Econometrics, Demand theory, Aggregation. Assistant Professor Barbara Alexander: Industrial organization. Public finance. Finance.

Assistant Professor John D. Capeci: Public finance. Finance. Econometrics.

Assistant Professor H. M. Stefan Gerlach: International finance. Macroeconomics.

Assistant Professor Robert J. Weiner: Industrial organization. International trade. Regulation and public policy. Business economics. Natural resource economics. Lecturer Paul D. Horn:
Urban planning and economic development.
Export research and technical assistance to small companies.

Instructor
Reid W. Click:
International
corporate finance.
Open-economy
macroeconomics.
International trade.

71	International Economics and Finance		
Degree Requiren	nents	Language Requirement.	Candidates will be required to demonstrate a high level of proficiency in one modern foreign language.
Master of Arts	Students must successfully complete an approved schedule of at least 12 courses during their three terms of residency at Brandeis. This includes seven required	Internship.	Students are encouraged to serve as interns with a business or governmental agency in the summer following their first year of study.
	courses, three electives selected from a "core option" group and a final-term seminar that may include work on a master's project. Students must also successfully complete an approved schedule of courses during one term of study at an affiliated foreign university.	Project.	An optional master's project involving a thesis or a report on an appropriate internship may be submitted no later than April 15 of the year in which the degree is to be conferred.
Residence Requirements.	Two years of full-time study at the normal course rate will be required. One term of study will be spent at a foreign university associated with the program.		
Courses of Instru	action		
IEE 111.	Analysis of the exposure of the multi-stice of	IFF 193 ₀	An analysis of global markets and have
EF 111a. International Corporate Finance	Analysis of the exposure of the multinational firm from accounting and economic perspectives, survey of investment finance and other international operations.	IEF 123a. Economy of Europe	An analysis of global markets and how individuals, institutions and governments adjust to changing incentives. European integration is used as an illustration. Topics include any horse-proposal serious and account of the proposal serious account of the propo
	Usually offered every year.		include tax harmonization, deregulation and a single currency.
	Mr. Click		Usually offered every year.
			Mr. Miles
IEF 112a. Accounting and	Introduction to basic principles, including analysis of financial statements using case		
Financial Analysis I	studies. Develops fundamental concepts and accounts and applies them to income measurement, capital values and cost, with a focus on international accounting issues.	Economics 135a. Industrial Organization	Economic analysis of American industry in terms of market structure, conduct and performance. Topics include business organization, concentration, barriers to entry,
	Usually offered every year.		price and product policies, profits, efficiency and progressiveness.
	Ms. Hughes		Usually offered every year.
			Ms. Alexander and Mr. Weiner
IEF 115b. International	Analysis of the institutions and instruments of international capital markets, including new		
Financial Markets	market participants. Review of spot, forward and options markets for foreign exchange, as well as eurocurrency and international bond markets, making extensive use of case studies.	Economics 136b. Managerial Economics	An application of the skills and perspectives of economists to a variety of managerial problems in business and the public sector. Some case studies are included.
	Usually offered every year.		Usually offered every year.
	Ms. Hughes		Mr. Dolbear and Ms. Hughes
IEF 121b. Law and International Economies	Review of U.S. and foreign laws applying to international transactions and the operation of financial institutions and economic analysis of international, commercial and financial law. Although IEF 121b includes some topics covered in ECON 74b, a student may receive credit for both courses by pursuing topics in greater depth.	Economics 141b. The Economics of Technological Change	Technological change as the central focus of modern economics. Topics include the economics of research and development, innovation, diffusion and technology transfer, appropriability, patents, information markets productivity, intersectoral effects and global competitiveness.
	Usually offered every year.		Usually offered every year.
	Mr. Weekstein		Ms. Carter
	MI. W CORSTOIL		

72	International Economics and Finance		
Economics 160a. International Frade Theory	Causes and consequences of international trade and factor movements. Topics include determinants of trade, effects on welfare and income distribution, trade and growth, protection, foreign investment, immigration and preferential trading. Usually offered every year.	Economics 184b. Econometries	An introduction to the theory of econometric regression and forecasting models, with applications to the analysis of business and economic data. Usually offered every year. Mr. Lewbel
	Ms. McCulloch	Economics 186b.	Survey of multi-equation quantitative models
Economics 161a. The Firm in the International Economy	Impact of the global environment — exchange rates, exchange controls, differential rates of growth and inflation and differences in consumer types and business regulation — on firm's sourcing, marketing and financing decisions.	Quantitative Models in Economics and Finance	in economic and financial analysis. Model types to be covered include macroeconomic models, financial and other simulation models, computable general equilibrium models, input-output analysis and linear programming. Usually offered in odd years.
	Usually offered every year.		Mr. Petri
	Mr. Aliber		M. I cut
Economics 171b. Advanced Topics in Finance	Investigates several topics in finance in greater detail than 205a, including the theory of choice using state-preference utility theory, the pricing of contingent claims, future contracts and markets and current empirical analysis into questions in finance.	Economics 187a. Workshop in Business and Forecasting	Develops an analytical framework for forecasting economic and financial market activities in the context of the American business cycle. A model-building approach is utilized to construct elementary and then intermediate and more contemporary models of the U.S. economy and financial markets.
	Usually offered every year.		Usually offered every year.
	Mr. Rathjens		Mr. Sinai
Economics 172b. Money and Banking	The industrial structure of the money market and the effect of structure upon the effectiveness of monetary policy. Financial intermediaries are analyzed; emphasis is on the way particular intermediaries, markets and financial instruments work and their effectiveness as transmitters of monetary policy.	Economics 188b. Optimization in Economics	Covers optimization techniques, including linear programming, game and decision theory. Applications focus on microeconomic problems. Usually offered every year. Mr. Lewbel
	Usually offered every year.		
	Mr. Weckstein	IEF 201a. International Macrocconomics I	Analysis of national accounts and economic fluctuations, equilibrium in goods and mone markets, aggregate supply and demand and the role of trade and international capital
Economics 175a. The Economics of Development	Draws on formal models and empirical literature for the purpose of investigating economic growth, production, sectoral development, household fertility and savings decisions and external trade and investment.		movements. Open-economy concepts are stressed and international comparisons are used to highlight the microeconomic determinants of macroeconomic institutions and policy.
	Usually offered in even years.		Usually offered every year.
	Mr. Jefferson		Messrs. Click and Dolbear
Economics 182a. Advanced Macroeconomics	Current research issues in macroeconomic theory. Selected topics include inflation, unemployment, the budget deficit, monetarism and rational expectations.	IEF 202b. International Macroeconomics II	Reviews standard international macroeconomics, including balance of payments accounting, PPP and interest pari and the Mundell-Fleming paradigm. Advanced topics include speculative attacks
	Usually offered every year.		against fixed exchange rate regimes, models
	Mr. Dolbear		of target zone and stopping hyperinflations.
			Usually offered every year.
			Mr. Gerlach

73	International Economics and Finance		
IEF 203a. Analytical Problems in International Economics and Finance	Introduction for first-year graduate students to important problems and basic analytical methods in the fields of international economics and finance. Covers contemporary issues in economic policy as well as cases in international financial and business strategy. Emphasizes writing and presentation skills through short paper assignments and in-depth classroom discussions. Usually offered every year.	IEF 221a. Laboratory in International Business	Covers the internationalization of U.S. business through direct observation and participation in decisions faced by area companies. Some students research case studies describing the past export experiences of companies, while others prepare consultant reports for companies that are currently developing internationalization strategies. Students work independently in small teams supervised by faculty. Usually offered every year.
	Mr. Aliber and Ms. McCulloch		Ms. Hughes and Mr. Wolf
IEF 205a. Financial Theory	Topics related to financial economics, including investors' attitudes toward risk, portfolio selection, asset pricing models (Capital Asset Pricing Model and the	IEF 221b. Laboratory in International	See description for IEF 221a. IEF 221a is not a prerequisite.
	Arbitrage Pricing Model), options and future	Business	Usually offered every year.
	markets, the efficient market hypothesis and the determinants of a firm's financial structure.		Ms. Hughes and Mr. Wolf
	Usually offered every year.	lEF 227b.	Examination of Japanese economic history,
IEF 211b. Case Studies in International Finance	Mr. Capeci Analysis of international corporate finance using case studies in the areas of foreign exchange exposure management, corporate capital transactions, foreign investment analysis, international banking and investment banking.	The Japanese Economy	growth and special features of Japanese economic institutions. Topics include various issues in labor economics, industrial organization, economic strategy at both the micro- and macroeconomic levels and prospective changes in dependence on trade. Usually offered every year. Mr. Evans
	Usually offered every year. Ms. Hughes	IEF 265a. The Chinese Economy	Examines special features of important periods and episodes of China's modern economy, starting with the prerevolutionary period and involving the recent reform
IEF 212b. Accounting and Financial Analysis II	Analysis of the techniques used by accountants to measure assets, equities and profits, with particular emphasis on the preparation and especially interpretation of corporate financial statements. Survey of alternative accounting systems and analysis of authoritative pronouncements. Emphasis on international issues. Usually offered every year. Mr. Sherman	Economy	period and including the recent reform program. Major themes include the impact of various economic policies and experiments, investment priorities, population growth, foreign technology and trade on the pattern and rate of development of the Chinese economy. Since few countries have embraced the range of national economic objectives and variety of institutional arrangements that China has in the last half century, the study of China's economy offers valuable insights into comparative economic systems, problems of economic and social development and issues of industrial organization.
IEF 214b.	Concepts and evidence from industrial		Usually offered in odd years.
International Business: Economics and	organization and international trade are applied to problems of business strategy, focusing on competition in international		Mr. Jefferson
Strategy	markets. Specific topics include the structure of competition in international industries and the role of institutions such as trading firms and countertrade. The course also examines the role of government through regulation and state-owned enterprise. Usually offered every year.	IEF 299b. Seminar in International Economics and Finance	In-depth analysis of special topics in contemporary international economics and finance. Topics vary from year to year and have included Korean export and financial market policies, the U.SCanada Free Trade Agreement, U.SJapan economic relations and the world oil market. The seminar features presentations by invited professionals and students. Students are required to
	Mr. Weiner		participate actively and contribute several short research papers.
	Mr. weiner		participate actively and contribute several short research papers. Usually offered every year.

Joint Program of Literary Studies

Comparative Literature, French, German, Russian and Spanish

Objectives

The Joint Program of Literary Studies (JPLS) accepts students desiring an M.A. and/or Ph.D. degree in one of the areas listed above. Interdisciplinary in design, the program aims to train literary scholars and teachers whose professional capabilities will be broader than their individual specialties. Students have the opportunity to study the theory of literature and history and the theory of literary criticism and scholarly methodology in addition to the specific literatures in which the degree will be earned. A small and carefully selected student body work closely with the faculty of the program and with one another in a core curriculum before specializing. Students are encouraged to plan an individual program of studies within their field of interest in consultation with their advisor(s). Although the program encourages individual initiative, with the advice and consent of advisor(s), it should be stressed that all students, whatever their areas, must master the basic literature. primary and secondary, in their field. The general examinations assume both breadth and depth of such knowledge. (Reading lists for each area are available.)

JPLS is, by definition, interested in promoting a "comparative" approach to literary studies. Even students who plan to focus on a single literature are engaged in seminars that promote the perspective of cross-cultural approaches: themes, motives, genres, "periods," etc. In addition, JPLS encourages students with interdisciplinary interests to pursue their literary studies in relation to certain other disciplines, in particular the following: comparative history (under the auspices of the Department of History), music, sociology and theater arts. Such students are invited to explore the seminar offerings in these programs or consult with the Graduate Advisors of any one of these programs for guidance on the suitability of certain 100 level courses listed in the undergraduate Bulletin.

(JPLS students may also receive approval for seminars in other programs, e.g., English.) The Interdisciplinary seminar, offered each year as the "Mellon" Seminar, is open to students from various programs, including JPLS, on approval of that seminar's instructors.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this program. Applications must be received no later than March 1. Please be sure to mark clearly the area of your choice (comparative literature, French, German, Russian or Spanish) on the application form. Each applicant must submit one or more college-level essays on a literary subject (one of which should be written in English) as a sample of work.

Faculty

Committee:

Professor Murray Sachs Chair (French)

Professor Edward Engelberg (Comparative Literature) Professor Edward K. Kaplan (Literary Theory)

Professor Robert Szulkin (Russian)

Professor Harry Zohn (German) Associate Professor **Dian Fox** (Spanish) In addition, other faculty members of the Departments of Germanic and Slavic Languages and Romance and Comparative Literature participate in this program.

Degree Requirements

Master of Arts

Students who have completed two years of full-time study in residence may be awarded the M.A. degree. Such students must be in good standing (no incompletes). In addition, such students must have passed the language requirement, either by certification and/or examination, as follows: single area candidates one foreign language other than the major language. Finally, such students must have passed satisfactorily the qualifying examinations.

Doctor of Philosophy

Program of Study.

Individual programs of study will be arranged between students and their advisors. The core curriculum consists of several elements: all students in the program are obligated to enroll in JPLS 201 (The History and Theory of Criticism); all students will be held responsible for certain works on literary theory, literary history and aesthetics (not studied in the criticism seminars) at the time of the general examination.

Although the program is designed to permit students to develop their studies coincident with their interests and talents and in consultation with their advisor(s), full-time students are expected to enroll in at least three literary studies seminars each year during the first two years of residence. In addition to JPLS 201, first-year students are expected to augment this schedule with at least two additional seminars from the literary studies offerings and suitable 100-level literature courses in areas of specialization (e.g., French, Spanish, German, etc.) or from offerings in comparative literature and European cultural studies.

Residence Requirements. The minimum residence requirement is two years of full-time study beyond the bachelor's degree. Additional course work during the third year is generally recommended.

Language Requirement. Students will be asked to demonstrate a reading competence in at least two foreign languages to be determined in consultation with their advisors. In certain areas of specialization, additional languages (e.g., Latin) may become necessary research tools. (Comparative literature students should consult the special statement of language requirements below.) Students must be certified in at least one language by the end of their first year in residence.

Qualifying Examinations.

Qualifying examinations must be taken at the start of a student's second full year in residence, with the purpose of determining that the student is qualified to study literature productively at the graduate level. Only students who have a complete and satisfactory record for their first year will be permitted to take the qualifying examinations. No postponement of these examinations is allowed. The examinations are both written and oral and will be scheduled each year for the third or fourth week in September. The examinations are prepared and conducted by a three-member faculty committee chosen at the end of the first year of study by the candidate in consultation with the candidate's faculty advisor. After the examinations, the candidate receives a detailed written evaluation from the three-member committee, based on the written and oral performances.

Students may take the general examinations, which demonstrate full competency in their chosen discipline, whenever they and their advisors feel they can appropriately do so, normally in the spring term of the third year. However, all students are expected to have completed the general examinations no later than the fall term of their fourth year in residence. Examinations will be offered twice each academic year, in October and May, and will consist of three written examinations and an oral examination. Details about the contents and procedures are available on request.

Admission to Candidacy. Candidates will be recommended for admission to doctoral candidacy when the residence and language requirements have been met, the general examinations have been successfully passed and a prospectus of the candidate's proposed dissertation topic has been approved by a committee of the area concerned.

Dissertation and Defense.

The completed dissertation must be read and found acceptable by its director and two other readers before the candidate is eligible for the Final Oral Examination. This examination is conducted by a committee of not less than four, one of whom must come from outside the candidate's area.

Teaching.

All students in the program are expected to do some supervised teaching, either as a teaching assistant or by means of other arrangements. In some areas, where teaching assistantships may at times be unavailable, students will be expected to fulfill some teaching assignments (occasional class lectures, for example) without remuneration.

For Candidates	in
Comparative Literature.	
Lucrature.	

1. Any student in the program who declares candidacy in comparative literature should decide, as soon as possible, on a major and minor literature. The major literature must be one of those offered by either the Department of Germanic and Slavic Languages or Romance and Comparative Literature (but not Italian). The minor literature may be Italian, any of the major literatures (see above), English, American or, after consultation, some other literature offered by the University. Exact
"proportions" cannot be stated in advance
and will be worked out in consultation between students and advisor(s). 2. Candidates in comparative literature are expected to take three language examinations as follows:

- a. The major language, which should be near level of mastery (reading, writing and speaking) on acceptance to the program. Students may simply be "certified" for this language if their level of competence is obvious.
- b. The second foreign language should be mastered as a reading language with a fluency that will permit easy access to all primary and secondary literature in the specified area. c. The third foreign language should be a
- reading tool for primary and especially secondary materials. It is quite possible that for certain areas of specialization — medieval, Renaissance, etc. - additional languages will become necessary (e.g., Latin, Catalan, Old French).

Courses of Instruction

Literary Studies	Offered every year.	Literary Studies	Usually offered every fourth year.
201a. History and	Mr. Kaplan	207a. Marxist	Ms. Harth
Theory of	Mr. Kapian	Criticism:	Ms. Hartn
Criticism: The		Literature and	
Development of		Society in Early	
Modern Critical		Modern Europe	
Theories		•	
I to Contract	II II 66 1.	Literary Studies	Usually offered every fourth year.
Literary Studies 202b.	Usually offered in even years.	208b. Cervantes in His	Ms. Fox
Fiction: Theory	Mr. Sachs	. European	MS. FOX
and Practice	Mr. Gaens	Context: Heritage	
		and Lineage	
Literary Studies	Usually offered in even years.		Y7 11 00 11 11
203a. Romantic	Mr. Engelberg	Literary Studies 209a.	Usually offered in odd years.
Phenomena	Mr. Engelberg	Modern	Mr. Engelberg
- monomena		Phenomena	MI. Engelberg
Literary Studies	Usually offered in even years.		
204a.		Literary Studies	Usually offered every fourth year.
Theory and Practice of	Mr. Zohn	211a.	M F II
Literary		The Tragic in Literature	Mr. Engelberg
Translation		Literature	
		Literary Studies	Usually offered every fourth year.
Literary Studies	Usually offered every fourth year.	212b.	
205a.	M. C. I.	Techniques of	Mr. Frey
Crosscurrents in the French and	Mr. Gendzier	Stylistic Analysis	
English			
Enlightenments		Literary Studies	Usually offered every fourth year.
		213b.	estiany offered every fourth year.
		— Modes of the	Mr. Szulkin
Literary Studies	Usually offered every fourth year.	Grotesque in Art	
206b. The Comic in	Mr. Sachs	and Literature	
Literature: Theory	Mr. Sacris		
and Practice		Literary Studies	Usually offered every fourth year.
		215a.	country officied every fourth year.
		Poetry, Criticism	Mr. Kaplan
		and Modernity:	
		Baudelaire	
		and His	
		Contemporaries	

77	Joint Program of Literary Studies		
	Joint Program of Energy Studies		
Literary Studies 216b. The End of the World	Readings in "High Modernism": Proust, Joyce, Mann, Yeats, T.S. Eliot. Usually offered every fourth year.	305a and b. Spanish. Readings in Spanish Texts	Ms. Fox and Staff
	Mr. Engelberg	306a and b. Latin-American. Readings in	
Literary Studies 217a. Russian Prose	Focuses on three major Russian novels of the 19th century — Dead Souls, War and Peace and The Brothers Karamazov — in the double context of the novel in Europe and	Latin-American Texts	Mr. Sánchez-Eppler and Staff
Forms and the European Tradition	current critical theory. According to their interests, students will help shape the reading for this seminar; they will draw additional readings primarily from the work of	Literary Studies 351-357a and b. Directed Research	Open to advanced graduate students with the consent of the instructor and the chair of the Literary Studies Program.
	Cervantes, Diderot, Rousseau, Sterne, Maturin and George Eliot.		Offered every year.
	Usually offered every fourth year. Ms. Miller	351a and b. Comparative Literature	Mr. Engelberg and Staff
	Ms. Miller	352a and b. French	Mr. Sachs and Staff
Literary Studies 220a. Modes of	This seminar focuses on the development of two literary genres, the epic and romance, from Dante's <i>Divine Comedy</i> through	353a and b. German	Mr. Zohn and Staff
Narrative: Epic and Romance	Spenser's Fairie Queene and Cervantes' Don Quixote. We attempt to determine to what extent the two genres become merged as each	354a and b. Russian	Mr. Szulkin and Staff
	successive literary generation, in various national literatures, remodels established conventions, formulas and tropes. We	356a and b. Spanish	Ms. Fox and Staff
	attempt to trace the emergence of the novel from these genres and examine some modern reworkings of typical romance material. Other major texts under analysis include <i>The</i>	357a and b. Latin-American	Mr. Sánchez-Eppler and Staff
	Romance of the Rose, romances from the Arthurian tradition by Chrétien de Troyes,	Literary Studies 400d.	Offered every year.
	Chaucer, the Gawain poet, Ariosto's Orlando Furioso and Cervantes' Don Quizote. Modern parodies and adaptations may include works like Wolker Pere's The Second Coming and	Dissertation Research	Staff
	like Walker Percy's The Second Coming and		
	Barthelme's The King. Offered Tuesday 1:30-4:30 (Block S2)	areas that constitute t	selected undergraduate courses in each of the the Joint Program of Literary Studies, which
	Barthelme's The King.	areas that constitute to may be of special into courses in each of the consult the undergrad	the Joint Program of Literary Studies, which crest to graduate students. For a full list of areas below and in European cultural studies, luate <i>Bulletin</i> under Departments of Germanic
301-306a and b.	Barthelme's <i>The King</i> . Offered Tuesday 1:30-4:30 (Block S2)	areas that constitute to may be of special into courses in each of the consult the undergrad and Slavic Language	he Joint Program of Literary Studies, which
301-306a and b. Readings in Area	Barthelme's <i>The King</i> . Offered Tuesday 1:30-4:30 (Block S2) Mr. Lansing	areas that constitute to may be of special into courses in each of the consult the undergrad and Slavic Language	the Joint Program of Literary Studies, which erest to graduate students. For a full list of areas below and in European cultural studies, luate <i>Bulletin</i> under Departments of Germanics, Romance and Comparative Literature and European cultural studies.
301-306a and b. Readings in Area Studies: Tutorials 301a and b. Comparative Literature. Readings in	Barthelme's <i>The King</i> . Offered Tuesday 1:30-4:30 (Block S2) Mr. Lansing	areas that constitute to may be of special into courses in each of the consult the undergrad and Slavic Language the concentration in I Comparative Literature 103b. (ENG 43b)	the Joint Program of Literary Studies, which erest to graduate students. For a full list of areas below and in European cultural studies, duate Bulletin under Departments of Germanics, Romance and Comparative Literature and European cultural studies. ture A study of the theme of madness and folly as exemplified by the major writers of the Renaissance, including Erasmus, Rabelais,
301-306a and b. Readings in Area Studies: Tutorials 301a and b. Comparative Literature. Readings in Comparative Texts	Barthelme's <i>The King</i> . Offered Tuesday 1:30-4:30 (Block S2) Mr. Lansing	areas that constitute to may be of special into courses in each of the consult the undergrad and Slavic Languages the concentration in I Comparative Literature 103b.	the Joint Program of Literary Studies, which erest to graduate students. For a full list of areas below and in European cultural studies, duate Bulletin under Departments of Germanics, Romance and Comparative Literature and European cultural studies. ture A study of the theme of madness and folly as exemplified by the major writers of the Renaissance, including Erasmus, Rabelais, Montaigne, Boccaccio, Ariosto, Shakespeare, Jonson and Cervantes.
301-306a and b. Readings in Area Studies: Tutorials 301a and b. Comparative Literature. Readings in Comparative Texts 302a and b. French, Readings	Barthelme's The King. Offered Tuesday 1:30-4:30 (Block S2) Mr. Lansing Usually offered every year. Mr. Engelberg and Staff	areas that constitute to may be of special into courses in each of the consult the undergrad and Slavic Languages the concentration in I Comparative Literature 103b. (ENG 43b) Madness and Folly in	the Joint Program of Literary Studies, which erest to graduate students. For a full list of a areas below and in European cultural studies, luate Bulletin under Departments of Germanies, Romance and Comparative Literature and European cultural studies. ture A study of the theme of madness and folly as exemplified by the major writers of the Renaissance, including Erasmus, Rabelais, Montaigne, Boccaccio, Ariosto, Shakespeare. Jonson and Cervantes. Usually offered in odd years.
301-306a and b. Readings in Area Studies: Tutorials 301a and b. Comparative Literature. Readings in Comparative Fexts 502a and b. French. Readings in French Readings in French Readings in French Readings in French Readings and b.	Barthelme's <i>The King</i> . Offered Tuesday 1:30-4:30 (Block S2) Mr. Lansing Usually offered every year.	areas that constitute to may be of special into courses in each of the consult the undergrad and Slavic Language the concentration in I Comparative Literature 103b. (ENG 43b) Madness and Folly in Renaissance	the Joint Program of Literary Studies, which erest to graduate students. For a full list of areas below and in European cultural studies, duate Bulletin under Departments of Germanies, Romance and Comparative Literature and European cultural studies. **ture** A study of the theme of madness and folly as exemplified by the major writers of the Renaissance, including Erasmus, Rabelais, Montaigne, Boccaccio, Ariosto, Shakespeare, Jonson and Cervantes.
Literary Studies 301-306a and b. Readings in Area Studies: Tutorials 301a and b. Comparative Literature, Readings in Comparative Texts 302a and b. French. Readings in French Texts 303a and b. German. Readings in German	Barthelme's The King. Offered Tuesday 1:30-4:30 (Block S2) Mr. Lansing Usually offered every year. Mr. Engelberg and Staff	areas that constitute to may be of special into courses in each of the consult the undergrad and Slavic Languages the concentration in I Comparative Literative Literature 103b. (ENG 43b) Madness and Folly in Renaissance Literature Comparative Literature Comparative Literature Comparative Literature 104a. At the Threshold	the Joint Program of Literary Studies, which erest to graduate students. For a full list of a areas below and in European cultural studies, luate Bulletin under Departments of Germanies, Romance and Comparative Literature and European cultural studies. **Ture** A study of the theme of madness and folly as exemplified by the major writers of the Renaissance, including Erasmus, Rabelais, Montaigne, Boccaccio, Ariosto, Shakespeare, Jonson and Cervantes. Usually offered in odd years. Mr. Lansing The challenge to social constraints and the emergence of a new worldview in the West. How early modern literature treated issues of
301-306a and b. Readings in Area Studies: Tutorials 301a and b. Comparative Literature. Readings in Comparative Texts 302a and b. French. Readings in French Texts 303a and b. German. Readings in	Barthelme's The King. Offered Tuesday 1:30-4:30 (Block S2) Mr. Lansing Usually offered every year. Mr. Engelberg and Staff Mr. Sachs and Staff	areas that constitute to may be of special intercourses in each of the consult the undergrated and Slavic Languages the concentration in IComparative Literature 103b. (ENG 43b) Madness and Folly in Renaissance Literature	the Joint Program of Literary Studies, which exercit to graduate students. For a full list of a areas below and in European cultural studies, luate Bulletin under Departments of Germanies, Romance and Comparative Literature and European cultural studies. **Ture** A study of the theme of madness and folly as exemplified by the major writers of the Renaissance, including Erasmus, Rabelais, Montaigne, Boccaccio, Ariosto, Shakespeare, Jonson and Cervantes. Usually offered in odd years. Mr. Lansing The challenge to social constraints and the emergence of a new worldview in the West.

78	Joint Program of Literary Studies		
Comparative Literature 105b.	A study of the concept of human nature with specific attention to whether people can be	French	
Sex and Sensibility in Pre- Revolutionary European Novels	educated to control or influence their erotic feelings and states of happiness. We shall trace the roles of family, money, personal identity and social norms in structuring the 18th-century novel. Focuses on the birth of the novel and Romanticism. Usually offered in even years. Mr. Gendzier	French 132b. The French Enlightenment	The origins of Romanticism and realism; modern notions of tolerance, the pursuit of happiness, feminism; conflicts between primitivism and progress, rationalism and experience, secular humanism and religious morality. Usually offered in odd years. Mr. Gendzier
Comparative Literature 107b. (ENG 118b) The Age of Irony: European Modernism	Examines the predominance of irony as a major mode of expression in modern art. Irony wears many masks: it often joins the tragic and the comic, deflates the pretentious and permits the author to manipulate not only the elements of the art but also its audience. Usually offered in odd years. Mr. Engelberg	French 134a. (ECS 115a) The Ancien Régime	Open to all students. Conducted in English with readings in English translation. Relations between power and culture in the ancien régime. Louis XIV's Versailles: its spectacular visual and literary art. Dissolution of the old order in the 18th century, as seen in painting and literature. Usually offered every third year.
Comparative Literature 150a. The European Novel: Realism	A study of major European novels of the 18th and 19th centuries that were especially influential in shaping a new tradition in the art of fiction: the novel of realism. Its		Last offered Spring 1989. Ms. Harth
	development and evolution are traced through close reading of representative novels. Usually offered in even years. Mr. Sachs	French 151a. (ECS 125a) Confrontations with Modernity	The Revolution of 1848 marks the definitive end of Romanticism and the inauguration of modernity. In Paris particularly, industrialization and urban renewal both reflected and anticipated radical changes in social, literary and artistic life. We study the breakdown of Romanticism and the establishment of modernity.
Comparative Literature 185a. Dickens and Dostoevsky	Considers such issues as narrative, literary realism and the manipulation of the grotesque and the sublime in representative works of Dickens and Dostoevsky. Because Dostoevsky was an avid reader of Dickens, we shall address questions of influence, particularly with regard to their shared thematic interests.		establishment of modernity. Usually offered every third year. Last offered Spring 1991. Mr. Kaplan
	Usually offered in even years. Ms. Miller	French 164a. (ECS 108a) Fact and Fiction in France	Open to all students. Conducted in English with readings in English translation. A study of how and why the French literary
Comparative Literature 193a. Topics in New World Studies	From the Chost Dance to Liberation Theology, this course examines texts from and about this hemisphere that register conflict between native and European imagining.		imagination has evoked real people and actual events from the French past in fictiona compositions like the historical novel and the historical drama.
	Usually offered every third year. Will be offered Spring 1992.		Usually offered every third year. Last offered Fall 1988. Mr. Sachs
	Messrs. Yglesias and Sánchez-Eppler	French 182b. (ECS 116b) French Literature and Painting	Open to all students. Conducted in English with readings in English translation. Explores the interrelations between French as and literature by studying selected texts (in English translation) and corresponding visua images from the 19th and 20th centuries. Usually offered every third year. Last offered Fall 1990.

Ms. Hale

79	Joint Program of Literary Studies		
German 110a. Introduction to the Life and Works of Goethe	Intensive study of many of Goethe's dramatic, lyric and prose works, including Goetz, Werther, Faust I and a comprehensive selection of poetry. Lectures and readings in German. Usually offered every third year. Last offered Fall 1989. Staff	German 195b. (ECS 109b) The Culture of the Weimar Republic	Focusing on Berlin in the troubled but fecund twenties, this course explores literature and music, art and architecture, the Neue Sachlichkeit (new sobriety) in its various manifestations, the theater of Reinhardt and Piscator, the musical theater of Brecht and Weill, the satire of Tucholsky and Kästner and the fabled cabarets of Berlin. Usually offered every third year Will be offered Spring 1992. Mr. Zohn
German 120a.	A survey of the literary and intellectual	Italian	
Enlightenment to Idealism: Lessing, Lenz, Schiller	movements — Enlightenment, Storm and Stress, Idealism — that eventually culminated in German Classicism. Emphasis will be on close analysis of representative works by Lessing, Lenz and Schiller. Lectures and readings in German. Usually offered every third year. Last offered Fall 1990.	Italian 140a. (ECS 103a) Dante's Divine Comedy	Open to all students. Conducted in English with readings in English translation. A close study of the entire poem — Inferno, Purgatorio, Paradiso — as a symbolic vision of reality reflecting the culture and thought — political, philosophical, theological — of the Middle Ages. Readings include two minor works, the Vita Nuova and On Monarchy.
	Staff		Usually offered in odd years.
German 130b. German Romanticism	Studies literary and theoretical works of the Romantic movement and examines concurrent attitudes toward the German past, religion, philosophy, art, music and science. Lectures and readings in German. Usually offered every third year. Will be offered Spring 1992.	Russian 134b. (ECS 119b) Chekhov	Mr. Lansing Conducted in English with readings available in Russian for concentrators and in English translation.
German 170b. (ECS 117b) Starting from Zero: German Literature Since World War II	Ms. Strenger Traces efforts of a new generation of writers to come to terms with the horrors of war and totalitarianism and with the materialism of the post-war "economic miracle." Literary investigation, supplemented by films, focuses on major writers and poets such as Grass, Borchert, Wolf, Böll, Celan, Dürrenmatt, Frisch, Weiss and Handke. Class discussions are in English.		Offers a detailed investigation of Chekhov's art emphasizing both the thematic and structural aspects of Chekhov's works. Attention is paid to methods of characterization, use of detail, narrative technique and the roles into which he casts his audience. Usually offered in even years. Ms. Miller
	Usually offered every third year. Will be offered Fall 1991. Mr. Frey	Russian 137a. (ECS 123a) The Heroine in Nineteenth- Century Russian Literature	Conducted in English with readings available in Russian for concentrators and in English translation. Examines questions of female representation and identity in readings from Pushkin,
German 190b. Vienna at the Turn of the Gentury	The literary and cultural scene in imperial Vienna during the final decades of Franz Joseph's reign is explored through the works of representative writers. Attention is paid to the relationship between men of letters and innovative thinkers, artists and musicians. Usually offered every third year.		Lermontov. Gogol, Aksakov, Goncharov, Turgenev, Dostoevsky, Tolstoy and Chekhov. Usually offered in odd years. Ms. Miller
	Last offered Spring 1990.		

80	Joint Program of Literary Studies		
Russian 146a. Dostoevsky	Conducted in English with readings available in Russian for concentrators and in English translation.	Spanish	
	A comprehensive survey of Dostoevsky's life and works, with special emphasis on the major novels. Usually offered in odd years.	Spanish 125a. The Golden Age of Spain	The classics of Spain's Renaissance and Baroque literary genius. Readings include the Abencerraje, Cervantes' Novelas Ejemplares, Quevedo's El Buscón, the drama of Lope de Vega and Pedro Calderón de la Barca and poetry from the mystics to the culteranistas.
	Last offered Fall 1990.		Usually offered in odd years.
	Ms. Miller		Ms. Fox
Russian 147b. (ECS 120b) Tolstoy Russian 148b. (THA 148b) A Survey of Twentieth- Century Russian Theater: Chekhov to the Present	Conducted in English with readings available in Russian for concentrators and in English translation. Studies the major short stories and novels of Leo Tolstoy against the backdrop of 19th-century history and with reference to 20th-century critical theory. Usually offered in even years. Ms. Miller Conducted in English with readings available in Russian for concentrators and in English translation. History and development of Russian drama from Chekhov to the present.	Spanish 150a. (ECS 113a) Seventeenth- Century Drama Spanish 161a. Modern Latin American Poetry	Open to all students. Conducted in English with readings in English translation. The major works, comic and tragic, of Spain's 17th-century dramatists: Cervantes' brief witty farces, Tirso's creation of the "Don Juan" myth, Lope's palace and "peasant honor" plays and Calderón's Baroque masterpieces. Usnally offered in odd years. Ms. Fox Development of 20th-century poetics through the works of Dario, Vallejo, Neruda, Paz and others. Usnally offered in even years.
to the Present	Usually offered in odd years. Mr. Szulkin		Messrs. Yglesias and Sánchez-Eppler
Russian 149b. (ECS 106b) Twentieth- Century Russian Literature, Art and Theater	Conducted in English with readings available in Russian for concentrators and in English translation. Focuses on the three decades, 1900-1930 and their various artistic movements as reflected in literature, painting and theater. Explores	Spanish 164b. (Formerly SPAN 160b) Studies in Latin American Literature	A comparative and critical reading of main trends, ideas and cultural formations in Latin America. Usually offered every year. Mr. Sánchez-Eppler.
	the interrelationships between artistic movements and the political scene. Usually offered in even years.	Spanish 170a. Enlightenment to the Generation of 1898	Readings from the Enlightenment to Unamuno, Baroja, Azorin, Machado and Ganivet.
	Mr. Szulkin	1090	Usually offered in odd years.
			Mr. Mandrell

Spanish 182b. (ECS 111b) The Spanish Civil War

Open to all students. Conducted in English with readings in English translation.

Focuses on works illustrating the background of the Civil War, its development and influence on the fiction, art, film, theater, poetry and journalism of later decades.

Will be offered Fall 1991.

Mr. Mandrell

Mathematics

Objectives

The graduate program in mathematics is designed primarily to lead to the Doctor of Philosophy degree. The formal course work gives the student a broad foundation for work in modern pure mathematics. An essential part of the program consists of seminars on a variety of topics of current interest in which mathematicians from Greater Boston often participate. In addition, the Brandeis-Harvard-MIT Mathematics Colloquium gives the student an opportunity to hear the current work of eminent mathematicians from all over the world.

Admission

The general requirements for admission to graduate work in mathematics are the same as those for the Graduate School as a whole. The department has available a variety of fellowships and scholarships for well-qualified students. To be considered for such financial support the student should submit an application by February 15.

Faculty

Professor Mark Adler Chair: Analysis: differential equations, completely integrable systems.

Professor Maurice Auslander: Noncommutative algebra. Homological algebra.

Professor Edgar H. Brown, Jr.: Algebraic topology, manifolds, cobordism, surgery, homotopy theory.

Professor
David A.
Buchsbaum:
Commutative
algebra.
Homological algebra.

Professor David Eisenbud Graduate Advisor: Commutative algebra. Algebraic geometry.

Professor Ira Gessel: Theoretical computer science, enumerative combinations.

Professor Michael Harris: Arithmetic of Abelian varieties over number fields. Class field theory. P-adic representation theory. L-functions. Professor Kiyoshi lgusa: Algebraic K-theory.

Professor Harold I. Levine: Differential topology. Singularities of differential maps.

Professor Jerome P. Levine: Differential topology. Knot theory and related algebra.

Professor Teruhisa Matsusaka: Algebraic geometry. Classification and deformations of algebraic varieties.

Professor Alan L. Mayer: Classical algebraic geometry and related topics in mathematical physics. Professor Paul B. Monsky: Number theory. Arithmetic algebraic geometry.

Professor Richard S. Palais: Nonlinear partial differential equations. Calculus of variations in geometry of mathematical physics. Transformation groups.

Professor Gerald W. Schwarz: Algebraic groups. Transformation groups. Visiting Professor Pierre van Moerbeke: Stochastic processes. Korteweg-deVries equation. Toda lattices.

Associate Professor Daniel Ruberman: Geometric topology: knots and low dimensional manifolds.

Associate Professor Kari Vilonen: Intersection homology. Perverse sheaves. D-modules. Assistant Professor Wolfram Gerdes: Differential topology. Algebraic K-theory.

Assistant Professor Kenji Matsuki: Algebraic geometry, classification of higher dimensional varieties.

Degree Requirements

Master of Arts

- 1. One year's residence as a full-time student.
 2. Successful completion of an approved schedule of courses.
- 3. Satisfactory performance in the basic courses in algebra, analysis, topology and geometric analysis — or equivalent examinations (see Program of Study).
- 4. Proficiency in reading French, German or Russian.

Doctor of Philosophy

- 1. Two years' residence as a full-time student.
 2. Successful completion of an approved
 - schedule of courses.

 3. Superior performance in the basic courses in algebra, analysis, topology and geometric
 - analysis or equivalent examinations (see Program of Study). 4. Participation in the second-year seminar.
 - 5. Superior performance in the qualifying examination.
 - Proficiency in reading two of French, German or Russian.
 - 7. Doctoral dissertation approved by the department.
 - 8. Successful defense of the dissertation.

Program of Study.

The normal first year of study consists of MATH 101a and b. 111a and b and 121a and b. In exceptional circumstances and only with the permission of the graduate advisor, a student with superior preparation may omit one or more of these courses and elect higher level courses instead. In this case he/she must take an examination in the equivalent material during the first year. The second year's work will normally consist of MATH 110a and higher level courses in addition to preparation for the qualifying examinations described below and participation in the second-year seminar. Upon completion of the qualifying examinations, the student will choose a dissertation advisor and begin work on a thesis. This should be accompanied by advanced courses and seminars.

Qualifying Examination.

The qualifying examination consists of two parts: a major examination and a minor examination. Both are normally taken in the latter part of the second year but may occasionally be postponed until early in the third year. For the major examination the student will choose a limited area of mathematics, e.g., differential topology, several complex variables, or ring theory and a major examiner from among the faculty. Together they will plan a program of study and a subsequent examination in that material. The aim of this study is to prepare the student for research toward the Ph.D. The minor examination will be more limited in scope and less advanced in content. The procedures are similar to those for the major examination, but its subject matter should be significantly different.

Admission to Candidacy.

To be admitted to candidacy for the Ph.D. degree in mathematics, the student must have successfully completed the qualifying examination, must demonstrate proficiency in reading French, German or Russian and must be recommended for candidacy by the program.

Dissertation and Defense. The doctoral degree will be awarded only after the submission and acceptance of an approved dissertation and the successful defense of that dissertation.

Courses of Instruction

Mathematics 101a. Algebra I

Groups, rings, modules. Galois theory, affine rings and rings of algebraic numbers. Multi-linear algebra. The Wedderburn Theorem. Other topics as time permits.

Usually offered every year.

Mr. Buchsbaum

Mathematics 110a. Geometric Analysis Manifolds, tensor bundles, vector fields and differential forms. Frobenius theorem. Integration, Stoke's theorem and deRham's theorem.

Usually offered every year.

Mr. Eisenbud

Mathematics 101b. Algebra II

A continuation of Mathematics 101a.

Usually offered every year.

Mr. Mayer

Mathematics 110b. Introduction to Lie Groups The correspondence between Lie groups and Lie algebras. Exponential map, homomorphisms, Lie subgroups and homogeneous spaces. Representations of compact Lie groups.

Usually offered every year.

Mr. Palais

83	Mathematics		
Mathematics 111a. Real Analysis	Measure and integration. LP spaces, Banach spaces, Hilbert spaces. Radon Nikodyn, Riesz representation and Fubini theorems. Fourier transforms. Usually offered every year.	Mathematics 202b. Algebraic Geometry I	A continuation of MATH 202a. Usually offered every year. Mr. Eisenbud
	Mr. Mayer	Mathematics 203a. Number Theory	Topics include basic algebraic number theory (number fields, Ramification theory, class
Mathematics 111b. Complex Analysis	The Cauchy integral theorem, calculus of residues and maximum modulus principle. Harmonic functions. The Riemann mapping theorem and conformal mappings. Other topics as time permits. Usually offered every year.		groups, Dirichlet unit theorem), zefa and L-functions (Riemann-function, Dirichlet L-functions, primes in arithmetic progressions, prime number theorem), class field theory, modular functions and modular forms, cyclotomic fields and automorphic forms on Adele groups.
	Mr. Van Moerbeke		Usually offered every year. Mr. Vilonen
Mathematics 121a. Topology l	Point set topology, fundamental group, covering spaces. Simplicial complexes, elementary homology and cohomology theory with applications. Manifolds and orientation, cup and cap products, Poincaré duality. Other topics as time permits.	Mathematics 203b. Number Theory	A continuation of Mathematics 203a. Usually offered every year. Mr. Vilonen
	Usually offered every year. Mr. J. Levine	Mathematics 211a. Topics in Differential	Usually offered every year.
Mathematics 121b. Fopology II	A continuation of MATH 121a. Mr. Igusa	Geometry and Analysis	Will not be offered Fall 1991.
Mathematics 150a. Combinatorics	Emphasis is on enumerative combinatorics. Generating functions and their applications to counting graphs, paths, permutations and partitions. Bijective counting, identities, Lagrange inversion and Möbius inversion.	Mathematics 211b. Topics in Differential Geometry and Analysis	Usually offered every year. Mr. H. Levine
	Usually offered in odd years.	Mathematics 221a. Topology ll	Elementary homotopy theory, fibrations, obstruction theory and spectral sequences.
	Mr. Gessel		Usually offered every year.
Mathematics 200a. Second-Year	Usually offered every year.		Mr. Gerdes
Seminar Mathematics 201a.	Mr. Eisenbud Introduction to some field of algebra. Topic	Mathematics 221b. Topology II	Differential topology: transversality and characteristic classes. Geometric definitions o cobordism, computation via homotopy theory. Other topics as time permits.
Topics in Algebra	changes each year. Usually offered every year.		Usually offered every year.
	Mr. Auslander		Mr. Brown
Mathematics 201b. Topics in Algebra	Introduction to some field of algebra. Topic changes each year.	Mathematics 250a. Riemann Surfaces	An introductory course to Riemann surfaces. Usually offered in even years.
	Usually offered every year.		Will not be offered in 1991-92.
	Will not be offered Spring 1992.	Mathematics 291d. Fellowship of the	Research seminar: not normally taken for credit.
Mathematics 202a. Algebraic	Varieties and schemes. Cohomology Theory. Curves and surfaces.	Ring — Seminar in Commutative Algebra	Usually offered every year.
Geometry I	Usually offered every year.		Staff

84	Mathematics		
Mathematics 293d. Topology Seminar	Research seminar; not normally taken for credit. Usually offered every year.	Mathematics 321a. Topology III	Usually offered every year. Will not be offered Fall 1991.
	Staff	Mathematics 321b. Topology III	A continuation of MATH 321a. Usually offered every year.
Mathematics 294d. Differential Geometry Seminar	Research seminar; not normally taken for credit. Usually offered every year.		Mr. Harris
	Will not be offered in 1991-92.	Mathematics 324a. Advanced Topics in Lie Groups and	Usually offered in odd years. Mr. Harris
Mathematics 295d. Algebraic Geometry Seminar	Research seminar; not normally taken for credit.	Representation Theory	
	Usually offered every year. Staff	Mathematics 324b. Advanced Topics in Lie Groups and Representation	A continuation of MATH 324a. Usually offered in odd years.
Mathematics 296d. Seminar in Artin Rings and	Research seminar; not normally taken for credit.	- Theory	Will not be offered Spring 1992.
Representation Theory	Usually offered every year. Staff	Mathematics 326a. Topics in Mathematics	An advanced course on a topic chosen each year by the department. Usually offered every year.
Mathematics 297d. Number Theory Seminar	Research seminar; not normally taken for credit.		Mr. Adler
	Usually offered every year. Staff	Mathematics 326b. Topics in Mathematics	A continuation of MATH 326a. Usually offered every year.
Mathematics 299a and b. Readings in Mathematics	Usually offered every year. Staff	Mathematics 399a and b.	Mr. Adler Usually offered every year.
Mathematics 301a.	Usually offered in even years.	Readings in Mathematics	Staff
Advanced Topics in Algebra	Mr. Eisenbud	All graduate courses week of classes.	will have organizational meetings the first
Mathematics 302a. Topics in Algebraic Geometry	Usually offered in even years. Mr. Matsuki	Mathematics 401d. Research	Independent research for the Ph.D. degree. Specific sections for individual faculty members as requested.
Mathematics 302b. Topics in Algebraic Geometry	Usually offered in even years. Will not be offered Spring 1992.	_	Staff
Mathematics 311a. Advanced Topics in Algebra	Usually offered every year. Will not be offered in 1991-92.	-	
Mathematics 311b. Advanced Topics in Analysis	Usually offered every year. Will not be offered in 1991-92.	-	

Music

Objectives

The graduate program in music, leading to the degrees of Master of Fine Arts and Doctor of Philosophy, is designed to provide a command of the craft of composition and an understanding of the nature, structural basis and historical development of music.

The following general fields of study are offered in music:

- 1. Composition and Theory. This program, emphasizing composition and supported by studies in theory and analysis, leads to the degrees of Master of Fine Arts and Doctor of Philosophy.
- 2. Musicology. In this program, students may elect to emphasize or concentrate in one of two different programs of study, music history or theory and analysis. In the music history program, a variety of techniques and methodologies, including source studies, style development and historiography are applied to different repertories and historical problems. The program in theory and analysis features works in the history of theory from the medieval period to the present, as well as analytic work in the context of theory construction and the evaluation of tonal as well as contemporary analytic models. This program leads to the degrees of Master of Fine Arts and Doctor of Philosophy.

Students must specialize in one of these areas, but composers are expected to undertake some work in music history and historians to acquire some competence in tonal writing.

Admission

Only a limited number of students are accepted. The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to this area of study.

Applicants for study in musical composition and theory are required to submit, in addition to a transcript of their undergraduate records, evidence of qualification in the form of examples of original work in musical composition and advanced work in musical theory. Applicants for admission in musicology should submit examples of their prose writing on music as evidence of their ability to handle the language and specialized vocabulary. Undergraduate theses or term papers are satisfactory. Musicology applicants wishing to specialize in theory and analysis should also submit examples of advanced work in musical theory. This work should be submitted together with the formal application for admission.

All applicants are expected to have some proficiency at the piano or an orchestral instrument. Information about this should be furnished when making formal application. A departmental written test in basic musicianship and analysis will be sent to all applicants. Deadline for applications is March 1.

Admission is granted for one academic year at a time. Readmission will be refused in cases where students have not demonstrated a capacity for acceptable graduate work.

Faculty

Professor Robert L. Marshall, Chair

Professor Martin Boykan

Professor Allan R. Keiler

Professor Yehudi Wyner Associate Professor Eric Chafe

Associate Professor James D. Olesen

Associate Professor Jessie Ann Owens Assistant Professor Eric D. Chasalow

Assistant Professor Margot Fassler Lecturer David Kopp

Performing Artists-in-Residence Sandra Dackow Richard Ford Sarah Mead Lydian String Quartet Judith Eissenberg Mary Ruth Ray Rhonda Rider Daniel Stepner

Degree Requirements

Master of Fine Arts

Language Requirements. Candidates for the master's degree in Musical Composition and Theory must possess a reading knowledge of one language — French, German or Italian.

Candidates for the master's degree in Musicology must possess a reading knowledge of French and German. Upon petition to the department substitutions for French are considered.

Foreign language course credits do not in themselves constitute fulfillment of the language requirements for advanced degrees. All candidates must pass language examinations set or approved by the music faculty and offered periodically during the academic year. Students are urged to take these examinations at the earliest feasible date. Musicology students should pass the Cerman reading examination by the end of their first year in residence. In case of failure, an examination may be taken more than once.

Instrumental Proficiency. At least moderate proficiency at the piano is required of all candidates for advanced degrees.

Residence Requirements. Twelve term courses at the graduate level, completed with distinction, and a thesis are required of all candidates.

The department normally allows credit for no more than two term courses taken at another institution.

In general, the program of course work is completed in two academic years. It is suggested that students pursue no more than three full courses in any one year.

For candidates in musicology.

The musicology program consists of three categories of courses: (1) proseminars in music history, (2) seminars in music history and (3) seminars in history of theory. Within each category courses are offered in the six principal historical periods of Western music from the Middle Ages to the 20th century (medieval, Renaissance, baroque, classical, Romantic, modern). The proseminars survey an array of topics illustrating the representative avenues of research and methodological approaches. Seminars typically concentrate on a single topic. Courses in analysis similarly belong to three categories: (1) proseminars and seminars in tonal analysis, (2) proseminars and seminars in nontonal analysis and (3) advanced analysis. Musicology students are required to take (1) at least one course in each of five historical periods, in any combination of proseminars or seminars; (2) at least two terms of analysis; (3) the proseminar in composition or its equivalent.

For candidates in composition.

Examinations.

Thesis.

Before the end of their second year of study, candidates for the degree of Master of Fine Arts must demonstrate their competence by means of a written general examination.

Composition students are required to take (1)

proseminars and seminars in composition, (2)

proseminars and seminars in tonal and nontonal analysis and (3) a proseminar in

music history or its equivalent.

The following timetable is suggested for major general examinations: For candidates in composition, the composition examination may be taken during the first year and repeated if necessary in the second; the analysis portion of the examination is normally taken during the second year. Examinations may be repeated in the third year only in the case of a student not proceeding beyond the master's degree. For candidates in musicology, major general examinations must be passed by the end of the second year; they may be repeated in the third year at the discretion of the faculty.

Candidates for the degree of Master of Fine Arts in Music are required to submit a thesis. For candidates in musical composition, this consists of a musical composition, its scope to be approved by the music faculty. For candidates in musicology, it is an analytical or historical study on a topic acceptable to the music faculty. Candidates in the history of music may submit, in lieu of a separate thesis, revised copies of two seminar papers that have been certified by the seminar instructor and at least one other faculty member as demonstrating a high degree of competence in research and writing. Two copies of the thesis or composition must be submitted to the department chairman in final form no later than December 1 for a February degree or April 1 for a May degree.

Doctor of Philosophy Admission to the doctoral program is normally granted at the end of the second year of residence and is determined by the student's performance in course work and general examinations. For candidates in music history, acceptance may be deferred pending repetition of portions of the major examinations.

Examinations.

Candidates for the Ph.D. degree have no additional written examination requirements in their major field beyond those for the M.F.A. In the minor field, doctoral-level examinations may, if desired, be replaced by the option of an additional term of course work completed with distinction. For candidates in composition and theory, a term of Music 200 or 299 is suggested: for candidates in history, an additional term of Music 227.

Residence Requirements. A minumum of 16 term courses at the graduate level, completed with distinction, are required of all candidates.

After meeting their language, residence and general examination requirements, candidates for the Ph.D. must pass a special oral qualifying examination.

In general, the program of course work will be completed in three academic years.

Applicants who have done graduate work elsewhere may apply for transfer of credit for such work: a maximum of one year of residence may be granted.

Admission to Candidacy.

Students will be admitted to candidacy for the Ph.D. degree upon successful completion of the written and oral qualifying examinations, fulfillment of the language requirements and the approval of a dissertation topic. Candidates for the degree of Doctor of Philosophy in Musicology are required to submit a dissertation proposal by the end of the first term of their third year in residence. An oral defense of the proposal takes place during the course of the second term of the third year.

Candidates for the doctoral degree in musicology normally take, in addition to two one-term courses (proseminar or seminar) beyond those taken for the master's degree, two terms of dissertation research (Music 401-411). This course may be taken with one or more instructors. In general, part of the time spent during the third year on dissertation preparation involves discussions with several faculty members.

Candidates for the doctoral degree in composition normally take, in addition to courses taken for the master's degree, two terms of the seminar in composition and two seminars in advanced analysis.

Dissertation.

Candidates for the degree of Doctor of Philosophy in Composition must submit an original musical composition and a thesis on a theoretical or analytical subject. Candidates for the degree of Doctor of Philosophy in Musicology must submit a dissertation on a historical, theoretical or analytical subject. Two copies of the doctoral dissertation, as well as an abstract of the dissertation not to exceed 350 words in length, should be submitted to the department or committee chairman no later than December 1 for a February degree and April 1 for a May degree of the academic year in which the Ph.D. degree is to be conferred.

Language Requirements.

Instrumental

Proficiency.

Candidates for the doctoral degree in the musicology must possess a reading knowledge of French and German. Upon petition to the department, substitutions for French are considered. Candidates in composition and theory must possess a reading knowledge of one language approved by the department.

At least moderate proficiency at the piano is required of all candidates.

Written dissertations should demonstrate the competence of the candidate as an independent investigator, his or her critical ability and effectiveness of expression. Upon completion of the dissertation, the candidate is expected to defend it in a Final Oral Examination.

Courses of Instruction

Except in the rarest circumstances, graduate credit is not allowed for courses numbered below Music 165.

Music 195a. Electronic Music Composition

The sequential study of a wide array of studio techniques, from classic analog to digital, through individual projects. Emphasizes the development of skills that integrate the studio into a powerful musical instrument. Related topics include the history of the medium, acoustics and recording production.

The program encourages those students with a special interest in literary studies to consult the seminar offerings in the Joint Program of Literary Studies, especially the seminar in Literary Theory offered each fall. They should also consult the chair of JPLS for the suitability of enrolling in certain 100 level courses in comparative literature, the European literatures or European cultural studies. In all cases, students should initially consult the music program's Craduate Advisor.

Usually offered every year.

Mr. Chasalow

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Music 197a. Tutorial in the Analysis of Tonal Music	The analysis of selected pieces of the tonal repertory. Students work on a number of different analytic techniques and skills. Usually offered every third year. Mr. Keiler	Music 204b. Proseminar in Music of the Eighteenth Century	In addition to tracing the evolution of the principal genres (e.g., sonata, symphony, string quartet, opera buffa, opera seria), the course assesses the historical position of the major figures from Bach and Handel to Mozart and Haydn. Particular emphasis is placed on understanding the phenomenon of the "style shift" from baroque to classical
Music 199a. Chamber Music Workshop	An intensive workshop for preprofessional and adult amateur musicians. Daily rehearsals (two hours coached, two hours rehearsal) for two weeks. Masterclasses and lecture demonstrations. Student concerts on each of the two weekends. Prerequisite:		style. Usually offered in odd years. Mr. Marshall
	Audition tape. Preference given to preformed groups.	Music 205a. Proseminar in	A broad study of the principal stylistic developments and musical genres of the 19th
	Usually offered every summer.	Music of the Nincteenth Century	century. Topics include significance of Beethoven on the musical thinking of the 19th century, the rise of national schools of
	Lydian String Quartet	,	composition, especially opera, and program music and its aesthetic and compositional bases.
Music 199b. Problems in the	Projects in the analysis and performance of select works of chamber music.		Usually offered every third year.
Interpretation and Performance of Chamber Music	Usually offered in odd years.		Mr. Keiler
——————————————————————————————————————	Discussions of special topics led by the faculty and occasional guests. Some of the sessions include performances of new works. Required of all graduate students. <i>Noncredit</i> .	Music 206b. Proseminar in the Music of the Twentieth Century	An examination of the music of the 20th century from a variety of viewpoints: historical, theoretical and analytical. Topics include several of the following: tonality and atonality in Germany and Austria, 1899-1923; 12-tone music and serialism; the French and Russian avant-garde; neo-classicism; experimental music in
	Usually offered every year.		America; minimalism, neo-Romanticism and eclecticism and recent music.
	Staff and Visiting Lecturers		Usually offered in even years.
Music 200b. Proseminar in	Broad coverage of the principal topics and research techniques of medieval music;		Staff
Medieval Music	structure of the liturgy, chant notation, oral transmission theory, tropes and sequences, polyphonic notation and rhythmic modes. Introduction to standard bibliographic tools including editions, facsimiles, microfilms, liturgical books and reference books.	Music 208b. Problems in Cultural Historiography	Usually offered in odd years. Mr. Keiler
	Usually offered every third year.	Music 209a.	The foundations of psychoanalytic theory in
	Ms. Fassler	Seminar in Psychoanalysis and Biography:	its contribution to the understanding of the artist. Topics include the relation of the artist to his work as seen from the perspective of
Music 201a. Proseminar in Music of the Renaissance	Usually offered in even years. Ms. Owens	The Psychoanalytic Study of the Artist	psychoanalysis and creativity and the creative process. In addition to the pioneering work of Freud, Rank and Kris, more contemporary issues in psychoanalytic theory, for example, ego psychology, are explored. The possible directions of applied psychoanalysis for musicology are considered.
14 4 2001	T. D. 66) 1		manicology are considered.

Music 202b. Proseminar in Music of the Baroque

Usually offered every third year.

Mr. Chafe

Usually offered every third year.
Mr. Keiler

Music 210a.
Seminar in Music of the Middle Ages
Ms. Fassler

Music		
Usually offered in odd years. Ms. Owens An investigation of various concepts related to	Music 221d. Proseminar in Schenkerian Analysis	The systematic study of the approach of music analysis developed by Heinrich Schenker. The basic concepts of diminution, voice leading, prolongation and structural level are studied and their significance is applied to smaller examples as well as the principal longer forms of tonal music. The
tonal organization (such as mode, key, system and solmization) based on a close reading of theoretical treatises from the 15th through the 17th centuries.		student gradually masters all of the notational techniques of linear analysis as they are applied to the tonal repertory.
Usually offered in even years.		Usually offered in even years.
Ms. Owens		Mr. Keiler
	Music 223d.	From the mid 19th century through the
Usually offered in even years. Ms. Owens	Semiuar: The Art Song in America, 1860-1920	opening decades of the 20th century, American composers produced vast numbers of accompanied songs for solo voice. Focuses primarily on the songs of New England composers, placing this varied repertory in its
An in-depth investigation of one selected topic in baroque music. Topics include the Monteverdi madrigals, 17th-century		historical context through research into local archives and the rich collections of printed music found in regional libraries.
The methodology employed varies according		Usually offered every third year.
to the subject; emphasis is given to more recent research in most cases.		Ms. Fassler
Usually offered every third year.	Music 224d.	Usually offered every third year.
Mr. Chafe	Seminar in Medieval Music Theory	Ms. Fassler
Usually offered in even years.	Music 925a or h	Usually offered every third year.
Mr. Marshall	Seminar in Baroque Theory	Staff
Usually offered every third year.	Music 926a	Usually offered in odd years.
Mr. Marshall	History and Literature of Western Music	Mr. Keiler
Assesses the current state of the several areas of Mozart research; biography, source studies.	to 1850	
work analysis, performance practice and the composer's music-historical position in the development of the "classical style."	Music 226b. History and	Usually offered in even years.
Usually offered every third year.	Western Music	Mr. Keiler
Mr. Marshall	the Present	
Usually offered in even years.	Music 227a.	Technical projects in theory and composition;
Mr. Keiler	Theory and	baroque counterpoint; canon, fugue and chorale prelude.
	Composition	Usually offered every year.
TV N CC 1		Staff
	Music 997h	Composition in classical forms with particular
Mr. Unafe	Proseminar in	emphasis on sonata form.
Usually offered in odd years.	Composition	Usually offered every year.
Usuany officied in odd years.		
	Usually offered in odd years. Ms. Owens An investigation of various concepts related to tonal organization (such as mode, key, system and solmization) based on a close reading of theoretical treatises from the 15th through the 17th centuries. Usually offered in even years. Ms. Owens Usually offered in even years. Ms. Owens An in-depth investigation of one selected topic in baroque music. Topics include the Monteverdi madrigals, 17th-century instrumental music and the Bach Passions. The methodology employed varies according to the subject; emphasis is given to more recent research in most cases. Usually offered every third year. Mr. Chafe Usually offered in even years. Mr. Marshall Usually offered every third year. Mr. Marshall Assesses the current state of the several areas of Mozart research: biography, source studies, work analysis, performance practice and the composer's music-historical position in the development of the "classical style." Usually offered every third year. Mr. Marshall Usually offered every third year. Mr. Marshall	Usually offered in odd years. Ms. Owens An investigation of various concepts related to tonal organization (such as mode, key, system and solmization) based on a close reading of theoretical treatises from the 15th through the 17th centuries. Usually offered in even years. Ms. Owens Usually offered in even years. Ms. Owens An in-depth investigation of one selected topic in baroque music. Topics include the Montever'd madrigals, 17th-century instrumental music and the Bach Passions. The methodology employed varies according to the subject; emphasis is given to more recent research in most cases. Usually offered every third year. Mr. Chafe Usually offered in even years. Mr. Marshall Assesses the current state of the several areas of Mozart research: biography, source studies, work analysis, performance practice and the composer's music-historical position in the development of the "classical style." Usually offered every third year. Mr. Marshall Usually offered in even years. Mr. Marshall Usually offered in even years. Mr. Keiler Music 226a. History and Literature of Western Music Theory: Baroque to 1850 Music 226b. History and Literature of Western Music Theory: 1830 to the Present Music 227a. Proseminar in Theory and Composition Usually offered in even years. Mr. Keiler Music 227b. Proseminar in Theory and Composition

Seminar in co Twentieth- 20 Century Techniques U	Written exercises utilizing some of the newer compositional techniques developed in the	Music 291b.	Scoring as a means of projecting a musical
Si	20th century. Jsually offered in odd years.	Advanced Orchestration	idea; questions of phrasing, emphasis and musical pacing. Analysis of scores as well as written exercises. Live performances whenever possible.
	Staff		Usually offered in even years.
	Usually offered in odd years.		Staff
Performance and Analysis M	Mr. Wyner	Music 292a and b. Seminar in Composition	Group meetings and individual conferences. Opportunities for the performance of student works is provided.
	Detailed examination of a few complete works of the tonal repertory (from Bach to Brahms).	-	Usually offered every year.
	Usually offered in even years.		Specific sections for individual faculty members as requested.
S	Staff		Staff
Analysis of 1	Works in this course are selected from the late 19th and 20th centuries. Composers such as Wagner, Wolf, Debussy, early Schoenberg,	Music 299a. Individual	Usually offered every year.
Music B	Bartok and Stravinsky. Usually offered in even years.	Research and Advanced Work	Staff
	Staff	Music 299b.	Usually offered every year.
		Individual Research and	Staff
	Detailed examination of selected works composed between 1908 and 1951.	Advanced Work	
Twentieth- U Century Music	Usually offered in odd years.	Music 401d. Dissertation	Specific sections for individual faculty members as requested.
S	Staff	Research	Required of all doctoral candidates.
	Detailed examination of selected works since 1951.		Staff
	Usually offered in odd years.	Electronic	Two studios with facilities for the composition
S	Staff	Music Studios	of electronic music are available to qualified student composers.
Music 246a. U Stravinsky	Usually offered every fourth year.		Director: Mr. Chasalow
	Staff		
Seminar in Serial Whusic P	Twelve-tone procedures in Schoenberg, Webern and more recent composers. Primarily concerned with the realization of serial technique in specific compositions. Attention is focused on questions of articulation, phrasing, form and harmonic distinction.		
U	Usually offered in odd years.		
N	Mr. Boykan		
Music 270b. A	A continuation of MUS 270a.		
	Usually offered in odd years.		

The Philip W. Lown School of Near Eastern and Judaic Studies

The Lown School is the center for all programs of teaching and research in the areas of Judaic Studies, Ancient Near Eastern Studies and Islamic and Modern Middle Eastern Studies. The school includes the Department of Near Eastern and Judaic Studies, the Hornstein Program for Jewish Communal Service and the Cohen Center for Modern Jewish Studies. The Department of Near Eastern and Judaic Studies offers academic programs in the major areas of its concern. The Hornstein Program is a

professional training program leading to the Master of Arts degree in Jewish Communal Service. It makes full use of academic resources of the Department of Near Eastern and Judaic Studies and other departments in the University. The Cohen Center for Modern Jewish Studies conducts, and serves to stimulate, research and teaching in Contemporary Jewish Studies, primarily in the field of American Jewish Studies.

Near Eastern and Judaic Studies

Objectives

The graduate program in Near Eastern and Judaic Studies, leading to the Master of Arts and Doctor of Philosophy degrees, is designed to train scholars and teachers in various areasof Near Eastern and Judaic Studies.

Admission

The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to this program.

Faculty

Professor Benjamin C. I. Ravid Chair: Jewish history.

Professor Marvin Fox Director of the Lown School: Jewish philosophy. Rabbinic thought. Modern Jewish thought. Professor Alan Mintz Modern Hebrew literature.

Professor Jehuda Reinharz Director, Tauber Institute: Modern Jewish history. History of Zionism. Professor Bernard Reisman: Jewish communal service.

Professor Jonathan Sarna: American Jewish history. Associate Professor Tzvi Abusch Director, Graduate Studies: Assyriology. Religions and cultures of the Ancient Near East.

Associate Professor Reuven Kimelman: Talmud and Rabbinic literature. Associate Professor Avigdor Levy Director, Islamic and Middle Eastern Studies: Middle Eastern studies.

Adjunct Associate Professor Ruth Gollan Director: Hebrew language program. Assistant Professor Marc Brettler: Biblical studies.

Assistant Professor David Wright: Bible and the Ancient Near East.

Lecturer Charles Cutter: Judaic bibliography.

Program of Study

Among the main fields in the area of Near Eastern and Judaic Studies in which courses are being given in the Graduate School are:

Bible and Ancient Near East Studies Jewish History Jewish Philosophy and Thought The Modern Middle East Contemporary Jewish Studies Early Rabbinical Literature

The program regularly offers additional courses in related fields.

Usually offered in odd years.

Mr. Levy

Usually offered every year.

A continuation of NEJS 102a.

Usually offered every year.

Ms. Karp

Ms. Karp

NEJS 102b.

Intermediate Literary Arabic

Thesis.

NEJS 104b. Early Aramaic	A study of biblical Aramaic with study of old and imperial Aramaic. Usually offered in odd years. Mr. Wright	NEJS 111b. Themes in Biblical Literature	An introduction to the major concepts of the religion of Israel in the light of ancient Near Eastern archaeology and literature. Emphasis is on presenting biblical religion as a system of beliefs and ideas both in the ancient framework and in relation to later Judaism and Christianity. All readings in English.
NEJS 105b. Hebrew Conversation, Composition and	For advanced students who wish to enhance their proficiency and accuracy in writing and speaking. Plays, essays, current articles from Israeli newspapers and films provide the basis for writing and discussion.		Usually offered in even years. Staff
Grammar: Writing Intensive	Usually offered every year. Ms. Gollan	NEJS 112a. Book of Genesis	Close critical reading of the Hebrew text of Genesis, with particular attention to the meaning, documentary sources and Near Eastern background of the accounts of creation and origins of human civilization in Chapters 1-11.
NEJS 106b. Elementary Ugaritie	Grammar and poetic texts are read with constant reference to biblical literature. Usually offered in even years.		Usually offered every third year. Mr. Abusch
NEJS 108a.	Staff Introduction to Akkadian grammar and	NEJS 112b. The Book of Isaiah	A textual and exegetical study; the historical background and leading ideas.
Elementary Akkadian	lexicon and to Cuneiform Script. This course is for beginning students of Akkadian. Usually offered every year.		Usually offered in even years. Staff
	Staff	NEJS 113a. Late Aramaic	A study of selections from Targumic Aramaic with study of other forms of Western and Eastern Aramaic.
NEJS 108b. Comparative Grammar of Semitic Languages	An introduction to and description of the Semitic languages, the internal relationships within the Semitic family and the distinctive grammatical and lexical features of the individual languages.		Usually offered in odd years. Mr. Wright
	Usually offered in odd years. Staff	NEJS 114a. Book of Amos	An intensive study of the Hebrew text, the historical background and the reading of ideas and contributions of biblical religion. Prerequisite: Reading knowledge of biblical Hebrew.
NEJS 109b. ntermediate Akkadian	Review of grammar and reading of Old Babylonian historical inscriptions, laws, letters and literary texts. Usually offered every year. Mr. Abusch		Usually offered every fourth year. Will be offered Spring 1992. Mr. Brettler
NEJS 111a. Introduction to Biblical Literature	A survey of the Hebrew Bible. Biblical books are examined from the various perspectives and are compared to other ancient Near Eastern compositions. No knowledge of Hebrew is presumed. Usually offered every year.	NEJS 115a. Book of Deuteronomy	A close examination of the text of Deuteronomy with special attention to its religious, legal and compositional features. Traditions found in the Book of Deuteronomy are compared with their counterparts elsewhere in the Pentateuch. The place of the Book of Deuteronomy in the history of the religion of Israel is considered.
	Mr. Brettler		Usually offered in even years. Staff

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Near Eastern and Judaic Studies

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NEJS 116b. The Problem of Evil in Jewish Philosophy	Beginning with an analysis of the general philosophical/theological problem posed by the problem of evil, the course continues with a systematic account of the main treatments of the problem in Jewish thought from antiquity to the present. Usually offered in even years. Mr. Fox	NEJS 123b. Classical Biblical Commentaries	An intensive study of the French and Spanish schools of Jewish commentators on selected books of the Bible. Prerequisite: Advanced reading knowledge of Hebrew. Usually offered every fourth year. Last offered Fall 1990. Mr. Fox
NEJS 117b. Dead Sea Scrolls NEJS 118b. Book of Psalms	Studies in the literature of Qumran texts, with particular attention to the exegetical literature. Usually offered in odd years. Staff Selected readings of biblical psalms. Special attention is paid to religious ideas, literary forms and poetics. Prerequisite: Reading	NEJS 124b. Introduction to Jewish Mysticism	A survey of the field of Jewish mysticism as reflected in its history, major texts, original ideas and symbolic structures. While focusing on the history and development of the central themes in Jewish mysticism, the course is also concerned with how to read a Jewish mystical text. All readings in English. Usually offered in even years. Mr. Fox
NEJS 120b. (JCS 120b.) Intermediate Talmud	knowledge of biblical Hebrew. Usually offered every third year. Last offered Fall 1990. Mr. Brettler Treatise Sanhedrin, chapter three, which deals with the issue of voluntary and compulsory arbitration and the binding nature of gambling agreements.	NEJS 125b. Midrashic Literature: Sifre Deuteronomy	An analysis of the midrashic method of the Sifre Deuteronomy. Emphasis is placed on a close reading of the text, with a view to developing in students the capacity to do independent analysis. Usually offered every fourth year. Last offered Spring 1990. Mr. Kimelman
NEJS 121b. Aspects of the Apocalyptic Imagination	Usually offered every year. Mr. Kimelman A comparative and analytic survey of the ideas of Apocalypse, through study of the literary images and expressions of world catastrophe and renewal in religious literature — from ancient Egyptian, Mesopotamian and Israelite antiquity through the classical and medieval expressions of Judaism, Christianity and Zoroastrianism. Aspects of the secularization of apocalyptic and	NEJS 126a. (JCS 126a.) Classical Rabbinic Thought	A study of the major trends of the thought world of the Talmud and Midrash, the foundational documents of postbiblical, classical Judaism and the various ways modern scholars have tried to categorize the basic concepts of the rabbinic worldview. Usually offered every fourth year. Last offered Spring 1991. Mr. Kimelman
NEJS 122b. Biblical Narrative	consciousness literature in modernity is also treated. Usually offered in even years. Staff An examination of the narrative techniques of various biblical stories, including selections	NEJS 126b. Agadic Literature: Avot De Rabbi Natan	A study of the "talmudic" commentary to Mishnah Avot, which alone of the Mishnaic tractates deals exclusively with agadah. Focuses primarily on literary and historical questions. Usually offered every fourth year. Last offered Spring 1988.
Texts	various Diblical stories, including selections from Genesis, Judges, Samuel, Jonah and Ruth. The basic tools for biblical research and the literary study of the Bible are explored. Prerequisite: Reading knowledge of biblical Hebrew. Usually offered in odd years. Mr. Brettler		Mr. Kimelman

NEJS 128a. Explorations in Islamic Literature II NEJS 128b. Exploration in Islamic Literature II NEJS 128b. Exploration in Islamic Literature II NEJS 129a. NEJS 129a. Foundations of Jewish Law NEJS 129a. A separation in Islamic Literature III	scussion of the philosophical issues involved prayer. ually offered every third year. st offered Spring 1989. Kimelman comprehensive view of Islamic literature, esenting the full chronological, regional, mic, socioeconomic, linguistic and sological breadth of the Islamic world, died in historical and social context. ually offered every year. Davidson e NEJS 128a for course description. NEJS 8a is not a prerequisite for 128b. ually offered every year. Davidson	NEJS 131b. Biblical Poetry: Love and Death NEJS 132b. (ICS 132b.) The Literary Study of Midrash	Usually offered every third year. Last offered Spring 1990. Mr. Fox A close reading of Hebrew poetic texts, with a consideration of what makes these texts poetic. Texts are chosen primarily from Song of Songs, Lamentations, Ecclesiastes and Job. Prerequisite: Reading knowledge of biblical Hebrew. Usually offered in even years. Mr. Brettler An introduction to the ancient rabbinic Bible commentaries known as aggadic midrash. The methods and assumptions of this literature are explored and related to modern literary theory. Usually offered every year.
NEJS 128a. Explorations in Islamic Literature I NEJS 128b. Exploration in Islamic Literature II NEJS 128b. Exploration in Islamic Literature II NEJS 129a. Foundations of Jewish Law A s Jew app Em law	st offered Spring 1989. C. Kimelman Comprehensive view of Islamic literature, esenting the full chronological, regional, mic, socioeconomic, linguistic and cological breadth of the Islamic world, idied in historical and social context. Lually offered every year. Loavidson E. NEJS 128a for course description. NEJS 8a is not a prerequisite for 128b. Lually offered every year. Loavidson	Biblical Poetry: Love and Death NEJS 132b. (JCS 132b.) The Literary	Mr. Fox A close reading of Hebrew poetic texts, with a consideration of what makes these texts poetic. Texts are chosen primarily from Song of Songs, Lamentations, Ecclesiastes and Job. Prerequisite: Reading knowledge of biblical Hebrew. Usually offered in even years. Mr. Brettler An introduction to the ancient rabbinic Bible commentaries known as aggadic midrash. The methods and assumptions of this literature are explored and related to modern literary theory.
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NEJS 128b. See Exploration in Islamic Literature II Ust Ms. NEJS 129a. As Foundations of Jewish Law app Em law	ually offered every year. 5. Davidson e NEJS 128a for course description. NEJS 8a is not a prerequisite for 128b. ually offered every year. 5. Davidson	(JCS 132b.) The Literary	Mr. Brettler An introduction to the ancient rabbinic Bible commentaries known as aggadic midrash. The methods and assumptions of this literature are explored and related to modern literary theory.
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NEJS 128b. See Exploration in Islamic Literature II Ust Ms. NEJS 129a. A s Foundations of Jewish Law app Em law	e NEJS 128a for course description. NEJS 8a is not a prerequisite for 128b. ually offered every year. s. Davidson	(JCS 132b.) The Literary	commentaries known as aggadic midrash. The methods and assumptions of this literature are explored and related to modern literary theory.
Exploration in Islamic Literature II Ust Ms. NEJS 129a. As Foundations of Jewish Law app Em law	8a is not a prerequisite for 128b. ually offered every year. s. Davidson	(JCS 132b.) The Literary	commentaries known as aggadic midrash. The methods and assumptions of this literature are explored and related to modern literary theory.
Ms. NEJS 129a. As Solution of Jewish Law app Em law	s. Davidson	·	literary theory.
NEJS 129a. A s Foundations of Jew Jewish Law app Em law			Usually offered every year.
Foundations of Jew Jewish Law app Em law	study of the theoretical foundations of		
Foundations of Jew Jewish Law app Em law			Staff
Em law	study of the theoretical foundations of wish law, its codification and its continuing	NEIG 494	C ANITHY 404 C 1
T.T.	plication to changing circumstances. nphasis is on contemporary issues of Jewish w. All required readings in English.	NEJS 134a. (ANTH 134a.) Muslim Cultures	See ANTH 134a for description. Usually offered in even years.
Ust	ually offered in odd years.		Staff
	: Fox		
NEJS 129b. Con	entemporary Jewish ethics has evolved	NEJS 136a. Biblical Motifs in Modern Hebrew Poetry	Continuity and discontinuity between ancient themes and modern experience — from the prophetic voice and imagery to contemporary irony and iconoclasm. Taught in Hebrew.
Jewish Ethics his	ongside major social, technological, storical and political changes in the modern orld. Analyzes the positions of Jewish	Today	Usually offered every third year.
thir	inkers regarding such issues as abortion,		Last offered Spring 1991.
	thanasia, war, the death penalty and omedical ethics.		, 0
Usu	ually offered in odd years.		Staff
Sta	aff	NEJS 136b. The Fiction of A.B. Ychoshua	A reading and discussion of the two most prominent writers of the Statehood Generation, who emerged in the 1960s to
The Philosophical the and Religious is g	comprehensive study of major aspects of e thought of Moses Maimonides. Attention given to his contributions to Jewish law and	and Amos Oz	offer new and profound insights into the Israeli psyche. Taught in English.
	s major philosophical and religious achings.		Usually offered every third year.
Usu	sually offered in even years.		Last offered Spring 1991.
Mr	r. Fox		Staff

Near Eastern and Judaic Studies

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NEJS 137a. Three Major Themes in Modern Hebrew Literature	A survey of Hebrew literature of the last 100 years, covering major writers of fiction and poetry. Topics include biblical motifs, national redemption, encounter with the Land of Israel, among others. Usually offered every third year. Last offered Fall 1989. Staff	NEJS 145b. (POL 132a.) The Making of the Modern Middle East	Discusses the processes which led to the emergence of the modern Middle East: disintegration of Islamic society, European colonialism, reform and reaction and the rise of nationalism and the modern states. Usually offered in even years. Mr. Levy
NEJS 137b. Contemporary Israeli Literature: Fiction	Israeli fiction reflects many of the problems in contemporary Israeli life: the relation to the Arab, the effects of the Holocaust, the self-definition of the Jew, etc. Usually offered in odd years. Staff	NEJS 147a. (HIST 106a.) History of the Middle East and the Ottoman Empire, 1450-1914	An historical survey of the Middle East from the establishment of the Ottoman Empire as the area's predominant power to World War 1. Topics include Ottoman institutions and their transformation and the Ottoman Empir as a world power. Usually offered in even years. Mr. Levy
NEJS 139a. Contemporary Israeli Literature: S.Y. Agnon — The Short Stories	Samples Agnon's writings in this genre, from the Hassidic tales to the symbolic and fantastic. A critical analysis of his narrative technique serves as a key to his unique style and vision. Usually offered in odd years. Staff	NEJS 147b. (POL 134b) The Arab-Israeli Conflict	Consideration of Arab-Jewish relations, attitudes and interactions from 1880 to the present. Emphasis is on social factors and intellectual currents and their impact on politics. Examines the conflict within its international setting. Usually offered in even years. Mr. Levy
NEJS 139b. Modern Hebrew Literature: Poetry	Critical analysis of trends and aesthetic values of modern Hebrew poetry from the end of the 19th century to the second half of the 20th century. Usually offered in odd years. Staff	NEJS 148b. The Magic Carpet: Travellers in the Islamic East	West meets East (the twain shall meet!) in works of Western (vs. Eastern) travellers (Marco Polo to Paul Bowles), portraying the Islamic world (our focus) in travelogues, letters, fiction and art. Usually offered every year.
NEIS 140a. (HIST 140a.) History of the Jews from the Maccabees to 1492	Judea during the second Commonwealth; Jews in the Roman Empire; origins of antisemitism; Jewish religious heritage; Islam and the Jews; the Jewish community; the church; state, society, economy and the Jews; the expulsion of the Jews from Western Europe. Usually offered in even years. Mr. Ravid	NEJS 149b. Islamic Bibliography	Ms. Karp Familiarizes the student with the history of oral and written communications in Islam ar the Middle East. Special emphasis is placed on bibliographic literature in Western languages. Usually offered every third year. Last offered Spring 1989. Staff
NEJS 141b. Catholics, Protestants and Jews in Western Europe from the Reformation to the Present	The political, legal, social and economic status of Catholics, Protestants and Jews in early and modern Europe, with emphasis on their struggle for equality in the transition from the medieval respublica Christiana to the modern secular nation-state. Usually offered in even years. Mr. Ravid	NEJS 151a. Autobiographies, Memoirs and Letters in Jewish History	Major periods, themes and personalities in Jewish history as presented in autobiographies, memoirs and letters. Emphasis is on historical insights, with attention also to the literary and psychologic dimensions. Students are encouraged to contribute from their own perspectives. Usually offered in even years.
NEJS 142a. (ICS 142a) An Introduction to Post-Biblical Jewish History	An introduction to the main trends and developments in the legal, economic, social and religious history of the Jews, with emphasis on major areas of Jewish settlement. Usually offered in odd years. Mr. Ravid		Mr. Ravid

97	Near Eastern and Judaic Studies		
NEJS 151b. (HIST 108b.) History of the Jews of Venice	Key problems in Jewish history in light of the experience of the Jews of Venice in the context of the Venetian social, political and economic history. Topics include the attitude of the church and state toward Jews, the ghetto, Jewish merchants and money lenders, Marranos and the inquisition, raison d'état and the admission of the Jews to Western Europe and North America.	NEJS 162a. American Judaism	American Judaism from the colonial period to the present, with particular emphasis on the various streams of American Judaism, the synagogue and the rabbinate. Usually offered in even years. Mr. Sarna
	Usually offered in odd years.	NEJS 163a.	A topical approach to the history of
	Mr. Ravid	(JCS 163a.) Jewish-Christian Relations in	Jewish-Christian relations in America from the colonial period to the present.
NEJS 152b.	A historical survey of the phenomena of	America	Usually offered in even years.
(HIST 107b.) A History of Antisemitism	antisemitism from classical antiquity to the present.		Mr. Sarna
Anusemusm	Usually offered every third year.	NEJS 163b.	Surveys American Jewish leadership
	Last offered Fall 1987.	(JCS 163b.) American Jewish	historically from colonial times until the present.
	Mr. Ravid	Leadership	Usually offered in even years.
NIFIC 4571	A control of the first field and the first fie		Mr. Sarna
NEJS 156b. Man and the Gods: Religion, Mythology and Magic of the Ancient Near East	An introduction to the religion of the ancient Near East. Special attention is paid to how myths express an understanding of the gods and society and how magic deals with daily concerns of human life. Usually offered in odd years. Mr. Abusch	NEJS 164b. (SOC 118b.) The Sociology of the American Jewish Community	The role of the subcommunity in American society; Jewish communal services in medieval and modern times; contemporary American Jewish communal forms; religion, community relations, overseas aid, social welfare and relationship with Israel.
	Mr. Adusch		Usually offered every year.
NEJS 157a.	An analysis of Israel's domestic and foreign		Staff
A History of Israel,	policies from 1948 to the present. Particular attention is given to social and political trends		
1948-Present	in Israeli society.	NEJS 165a. American Jewish	Seminar. Enrollment limited to 25.
	Usually offered every fourth year. Last offered Spring 1990.	Culture	Examines selected aspects of American Jewish culture in the 19th and 20th centuries.
	. 0		Usually offered in odd years.
	Mr. Reinharz		Mr. Sarna
NEJS 160a. (JCS 160a.) The Emergence of the American Jewish Pattern	Survey of American Jewish history from the earliest settlement to the present. The emergence of the institutions, ideologies, lifestyles and cultural norms that constitute the American Jewish pattern. Usually offered every year.	NEJS 166a. (JCS 166a.) Modern Jewish History to 1880	Themes include Enlightenment and Haskalah in Eastern and Western Europe, Hasidism. Emancipation and the problem of the marginal Jew, the Science of Judaism and the development of denominationalism in Judaism.
	Staff		Usually offered every fourth year.
			Last offered Fall 1988.
NEJS 161a. (SOC 118a.) American Jewish	A survey of contemporary American Jewish life, with special emphasis on the diverse forms of Jewish identification found in		Mr. Reinharz
Life	American Jewry. Topics include Reform, Conservative and Orthodox Judaism; Jewish family life, including intermarriage and the relationship of Jews to the general society and to other ethnic groups. Usually offered every year.	NEJS 166b. (JCS 166b.) Modern Jewish History, 1880-1948	Themes include integration and assimilation, migration, nationalism, Zionism, non-Zionism, anti-Zionism, Diaspora Nationalism, Western and Eastern Jewry in the period between the World Wars, the Holocaust and the establishment of the State
	Staff		of Israel.
			Usually offered every fourth year.
			Last offered Spring 1989.
			Mr. Reinharz

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NEJS 167a. East European Jewish Immigration to the United States	A historical survey of East European Jewish immigration to the United States, 1881-1924. Regular readings are supplemented by primary sources, immigrant fiction and films. Usually offered in odd years.	NEJS 175a. History of Zionism	The rise and development of the Zionist idea, Zionist parties, politics and diplomacy in relation to Jewish history and international affairs from 1880 to 1950. Zionism today. Usually offered every fourth year.
	Mr. Sarna		Mr. Reinharz
NEJS 168a. History and Culture of the Jews in Eastern Europe to 1914	Jewish civilization in Poland and Russia from the earliest Jewish settlements until World War I, with emphasis on attempts to create a national culture that was both "modern" and "Jewish."	NEJS 177a. Agnon and His Contemporaries: Hebrew Literature in Translation	Examines the existence and struggle of the Jews in the Diaspora and Israel from World War I to the present, as reflected in modern Hebrew literature. Attention is also given to parallel motifs in European literature. Usually offered every third year.
	Usually offered every year.		
	Staff		Last offered spring 1990.
NEJS 168b.	Topics include relations between Jews and		Staff
History and Culture of the Jews in Eastern Europe, 1914 to the Present	non-Jews, Jewish politics, culture, the Holocaust and the current revival of Jewish identity in Eastern Europe. Usually offered in even years.	NEJS 182a. Introduction to Jewish Bibliography	An introduction to general bibliographic tool and resources in the major subfields of Judai studies, such as history, philosophy, Hebrew language and literature, antisemitism and Holocaust studies.
	Staff		Usually offered every year.
NEJS 169a.	A systematic examination of the Holocaust in		Mr. Cutter
(JCS 169a.) The Destruction of European Jewry	the context of both Jewish and modern European history. Interdisciplinary approaches to historical sociology and legal philosophy are applied. Usually offered every year.	NEJS 184a. (HIST 184a.) Arabs and Jews in Palestine, 1856-1948	See HIST 184a for course description. Usually offered every third year. Mr. Wasserstein
NEJS 169b. (JCS 169b.) Responses to the	Historical, literary, psychological, legal and philosophical responses to the particular nature of the Holocaust are considered as they	NEJS 201a. Genesis: A Study in Method	An examination of the Hebrew text of Genes in relation to the methodologies of modern biblical scholarship. Particular attention to source criticism, form criticism and the text
Holocaust	have challenged ideas about God, man, the meaning of history and Western civilization.		its ancient environment.
	Usually offered every fourth year.		Usually offered every third year.
	Last offered Spring 1990.		Mr. Brettler
	Staff	NEJS 202a. Seminar in Biblical Religion	An advanced seminar dealing with selected themes and topics in biblical religion, with comparative reference to other ancient Near
NEJS 170b. East European	Focuses on the great challenges and changes that were experienced by East European		Eastern religions.
Jewry: In Modern Times	Jewry, including antisemitism, the Jewish Enlightenment and the emergence of a secular		Usually offered in even years.
	Jewish culture, the rise of modern political currents and the liquidation of Jewish institutions in the Soviet Union.		Staff
	Usually offered every year.	NEJS 202b. Introduction to	Usually offered every third year.
	Staff	Sumerian: Historical Inscriptions	Mr. Abusch
NEJS 171b. Trends and Values in Yiddish Literature	A study (in English) of the major lines of development in the classical period of Yiddish literature: the works of Sholem Aleichem, Mendele and 1.L. Peretz.		
	Usually offered in odd years.		
	Staff		

99	Near Eastern and Judaic Studies		
NEJS 203a. Biblical Historiography	An examination of representative types of historical writings in the Bible, their relationship to ancient events and to political and religious ideologies and the problems of writing modern histories of ancient Israel. Usually offered every third year. Mr. Brettler	NEJS 209b. Advanced Sumerian: Literary and Religious Texts NEJS 210a. Seminar on the Institutional	Usually offered every third year. Mr. Abusch Usually offered in even years. Staff
NEJS 203b. Bible and Ancient Near East Studies	Ongoing seminar examining the major works in modern biblical and ancient Near East studies, with special focus on methodology and trends of research.	Development of the American Jewish Community	
	Usually offered every year.	NEJS 210b.	An examination of changing ideological and
	Messrs. Brettler and Abusch	Jewish Communal Service: Historical and Philosophical Contexts	philosophical positions relating to the development of the American Jewish community and the profession of Jewish communal service.
NEJS 204a.	The development of biblical Hebrew in its	Contexts	
History of Biblical Hebrew:	North-West Semitic setting. Lexical and grammatical characteristics of early Biblical		Usually offered in even years.
Continuity and Change	Hebrew are studied and selected extra-biblical sources are examined.		Staff
	Usually offered in even years.	NEJS 211a.	A close reading of Hosea. Various approaches
	Staff	The Book of Hosea	to the text are compared, especially as they relate to the grammatical, textual and source-critical problems of this book.
NEJS 204b.	Usually offered in even years.		Usually offered every third year.
Biblical Textual Criticism	Mr. Abusch		Mr. Brettler
NEIC 906	II w cf 1	NIFIC 9441	A in the desired and distribution Distribution
NEJS 206a. Advanced Akkadian: Literary Texts	Usually offered every third year. Mr. Abusch	NEJS 211b. Medieval Jewish Biblical Exegesis	An introduction to traditional Hebrew Bible commentaries. The emphasis will be on building competence in reading these texts in their original Hebrew.
			Usually offered every third year.
NEJS 206b. Advanced	Usually offered every third year.		Mr. Brettler
Akkadian:	Mr. Abusch		
Literary Texts		NEJS 212b. Psalms	An examination of selected chapters from the Hebrew text of the book of Psalms.
NEJS 207a. Advanced	Usually offered every third year.		Usually offered every third year.
Akkadian: Religious Texts	Mr. Abusch		Mr. Brettler
NETO COTA		NEJS 213b.	Deals with one or more aspects of individual
NEJS 207b. Advanced	Usually offered every third year.	Semitic	Semitic languages in different years.
Akkadian: Religious Texts	Mr. Abusch	Languages: Syntax of Biblical	Usually offered every third year.
		Hebrew	Staff
NEJS 208b. Advanced	Usually offered every third year.		
Akkadian: Historical Texts	Mr. Abusch	NEJS 215b. Topics in American Jewish	Usually offered every third year. Staff
NEJS 209a.	Usually offered in even years.	Communal Organization	
Advanced Seminar in	Staff		
Biblical and Ancient Near	Stati		
Eastern Poetics			

100	Near Eastern and Judaic Studies		
NEJS 220b. Introduction to the Study of American Jewish History: Bibliography, Historiography and Methods	A critical survey of the literature of American Jewish history with special attention to questions of methodology. Students examine basic reference works and classics in the field and choose one subfield within American Jewish history to explore in depth. Usually offered in alternate years.	NEJS 252b. Hasidism and Its Opponents	The rise of Hasidism and the ensuant religious conflict between Hasidism and Mitnagdim. Usually offered in even years. Staff
NEJS 221b. The American Jewish Experience: Sources and Interpretations	Mr. Sarna An in-depth examination of primary sources in selected areas of American Jewish history, with special attention to problems of interpretation and generalization. Usually offered in odd years. Mr. Sarna	NEJS 257d. German Jewish History	Topics include the debate over the Emancipation of the Jews, religious reactions, the science of Judaism, antisemitism, the impact of World War I, the inter-war period and German Jewry under Nazism. Usually offered every fourth year. Mr. Reinharz
NEJS 225b. Northwest Semitic Inscriptions I	A careful reading of Hebrew, Edomite and Moabite inscriptions from the First Temple period. Issues of epigraphy, historical grammar, dialectology and historical reconstruction are examined.	NEJS 258b. Seminar on Modern Jewish History and Historiography	Usually offered in even years. Mr. Reinharz
	Usually offered every third year. Staff	NEJS 259b. Topics on Zionism	Usually offered every third year. Mr. Reinharz
NEJS 230a. Seminar in Medieval Jewish Philosophy	Maimonides and contemporary criticism. Usually offered in even years. Mr. Fox	NEJS 260a. Seminar on the Philosophical Foundations of Jewish Ethics: Ancient and Medieval	Usually offered every fourth year. Mr. Fox
NEJS 230b. Seminar in Medieval Jewish Philosophy	Usually offered in even years. Mr. Fox Usually offered in even years.	NEJS 260b. Seminar on the Philosophical Foundations of Jewish Ethics: Modern	Usually offered every fourth year. Mr. Fox
Seminar in Modern Jewish Philosophy	Mr. Fox	NEJS 264a. Seminar: Rabbinic Theology	A study of the various methodologies used to study the thought of the rabbis of the Talmud and Midrash.
NEJS 234b. Seminar in Late Medieval Jewish Philosophy	Usually offered every third year. Staff	nazzme mestegj	Usually offered every third year. Mr. Kimelman
NEJS 240a. As of Sufferance and Not on Right	An examination of the charters and laws regulating the status of the Jews as a corporate hody in the pre-Emancipation Diaspora, with special attention to religious, economic and social factors. Usually offered in odd years. Mr. Ravid	NEJS 287b. (JCS 287b.) Methods in Jewish Community Research	See JCS 287b for course description. Usually offered every year. Mr. Tobin

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NEJS 317-340. Reading Courses 317a and b.	Special tutorials for advanced graduate students.	335a and b. Readings in East European Jewish History	Staff
Readings in Assyriology	Mr. Abusch	336a and b. Readings in	Stan
321a and b. Readings in Medieval Jewish Philosophy	Mr. Fox	Bible and Northwest Semities	Staff
322a and b. Readings in Modern Jewish Philosophy	Mr. Fox	337a and b. Readings in Talmudic and Midrashie Literature	Mr. Kimelman
323a and b. Readings in Jewish Thought	Mr. Fox	339a and b. Readings in Ottoman History and Civilization	Mr. Levy
324a and b. Readings in Hebrew	Ms. Nevo-Hacohen	340a and b. Readings in Modern Middle	,
326a and b. Readings in Biblical Literature	Specific sections for individual faculty members as requested. Staff	Eastern History NEJS 401d.	Mr. Levy Independent research for the Ph.D. degree.
328a and b. Readings in Ancient Near Eastern	Stan	Dissertation Colloquium	Specific sections for individual faculty members as requested. Staff
Languages 329a and b. Readings in Ancient Near Eastern Religions and Cultures	Mr. Abusch Mr. Abusch		
330a and b. Readings in the Sociology of the Jewish Community	Staff		
331a and b. Readings in Yiddish Literature	Staff		
332a and b. Readings in American Jewish History	Mr. Sarna		
333a and b. Readings in the History of the Jews in Europe to 1800	Mr. Ravid		
334a and b. Readings in Modern Jewish History	Mr. Reinharz		

The Hornstein Program in Jewish Communal Service

Objectives

The two-year program in Jewish communal service or Jewish education leading to the Master of Arts degree, integrates Jewish studies and professional training, preparing students for positions in a variety of settings in the Jewish community, including federations, community centers, Hillel foundations, schools and other communal organizations.

A special one-year master's program is offered for students with graduate degrees in social work, Jewish studies or a related field. In addition, part-time study is permitted, but students must complete the program in no more than four years.

In addition to the basic program in Jewish communal service, students have the option to specialize in one of the three following concentrations: (1) fund-raising and philanthropy, (2) the Nathan Perlmutter Institute for Jewish Advocacy and (3) Jewish education.

Admission

The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to the Hornstein Program in Jewish Communal Service. In addition, applicants are expected to submit results of either the Graduate Record Examination or the Miller Analogies Test, a statement that describes the applicant's Jewish training and background and future vocational plans and a sample of written material. Applicants are expected to arrange for a personal interview.

Faculty

Professor Bernard Reisman Director: American Jewish communal studies.

Adjunct Professor Earl Raab: Jewish advocacy. Visiting Professor Carmi Schwartz: Philanthropy and fund-raising.

Adjunct Associate Professor Sherry Israel: American Jewish community. Israeli society. Assistant Professor Joseph Reimer: Contemporary Judaism. Jewish identity.

Adjunct Assistant Professor Susan Shevitz: Jewish education: organizational theory. Adjunct Assistant Professor Lawrence Sternberg: Jewish advocacy and community relations.

Lecturer with rank of Assistant Professor Nancy Bloom: Fieldwork. Jewish communal service. Lecturer Joshua Elkin: Jewish education.

Lecturer Helen Jeffrey Kadish: Philanthropy and fund-raising.

Lecturer Daniel Margolis: Jewish education. See the Department of Near Eastern and Judaic Studies and the Heller School catalog for other faculty and course offerings.

Degree Requirements

Master of Arts

Students in the Hornstein Program may concentrate in one of the following:

1. Jewish communal service (with specializations in group work and community organization or management) or

2. Jewish education (formal or informal)

3. Jewish advocacy

4. Fund-raising and philanthropy

Academic Studies

Students are expected to complete a minimum of 16 courses, including study in the following areas: professional studies, contemporary Jewish studies and classical Jewish studies. Students may take courses at other Boston-area graduate schools (Boston University and Boston College).

Courricular Courses

Seminar on Contemporary Jewish Issues. During the fall term this seminar meets every Friday with guest speakers having a particular point of view on a range of subjects on the Jewish agenda today.

Tisch Seminars.

Once each year both first-and second-year students participate in an intensive institute focusing on an area of professional skill.

Betty Starr Colloquium.

For first-year students. During intersession three days are devoted to visiting the national offices in New York City of major Jewish organizations.

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	Kohl Practicum in Educational Materials and Learning Environments. For second-year Jewish education concentrators. Four days will be spent in Chicago during intersession at the Kohl Teacher Center. Students will gain experience in designing educational materials and learning environments. Milender Seminar in Jewish Communal Leadership. Each year both first- and second-year students participate in a three-day seminar on Jewish communal leadership with an	Fieldwork/ Internship.	Students have two fieldwork experiences in a Boston-area Jewish educational or communal service organization. In the first year, fieldwork is 15 hours a week; in the second year, 20 hours. This schedule requires students to be in residence through the end of May and to plan for a shorter winter intersession than indicated in the University's Academic Calendar. Students are required, during the second year, to submit a major substantive paper growing out of some phase of their fieldwork experience. The paper should analyze a
	outstanding professional leader of the Jewish communal world. Summer Study in Israel. Joseph and Esther Foster Seminar in Israel on contemporary Jewish life is sponsored in cooperation with the Center for Jewish Education in the Diaspora of Hebrew University and is required of all students at the completion of their first year of study. The four-week program, held during May and June, is a combination of classes and field visits designed to provide an in-depth analysis of Israel. Costs for the Israel	Residence Requirement. Language Requirement.	practical issue in Jéwish communal service in light of both the student's own experience and the relevant literature. The residence requirement for this program is two years of full-time study or the equivalent thereof in part-time study. Fluency in Hebrew is required at a level comparable to two years of college training. Students not meeting this requirement upon entrance are required to enroll in courses in Hebrew language — not for credit.
Courses of Instru JCS 53b. Introduction to	See NEJS 53b.	JCS 165a. American Jewish	See NEJS 165a for course description.
JCS 120b.	Usually offered every year. Mr. Kimelman See NEJS 120b.	JCS 166a.	Usually offered in odd years. Mr. Sarna See NEJS 166a for course description.
Intermediate Talmud	Usually offered every year. Mr. Kimelman	Modern Jewish History to 1880	Usually offered every fourth year. Mr. Reinharz
JCS 124a. Great Ages and Ideas of the Jewish People	See NEJS 1a for course description. Usually offered every year. Mr. Kimelman	JCS 166b. Modern Jewish History 1830-1948	See NEJS 166b for course description. Usually offered every fourth year. Mr. Reinharz
JCS 142a. An Introduction to Post-Biblical Jewish History	See NEJS 142a for course description. Usually offered in odd years. Mr. Ravid	JCS 202b. Jewish Life Cycle	Focusing on central moments of transition in the Jewish Life cycle, this course explores the traditional basis for celebrating life cycle events and the psychological significance of these events.
ICS 157a. History of Israel, 1948-Present	See NEJS 157a for course description. Usually offered in even years. Mr. Reinharz		Usually offered in odd years. Mr. Reimer

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JCS 203b. Jewish Family Education	Every person emerges from a family experience that leaves its mark on personal and professional ideutity. Explores the dynamics of Jewish family life, the growth and changes in family life and the ways to educate Jewish families. Usually offered in odd years. Mr. Reimer	JCS 215a. The Developing Learner in a Jewish Educational Setting	Helps Jewish educators get a clearer sense of the learning needs of students and other clientele. Through the discipline of developmental psychology, the course covers periods of child, adolescent and adult development, trying to apply what is learned from a general psychology to the particular settings in which Jewish education is pursued. Usually offered in odd years.		
JCS 205a. Introduction to Jewish Communal Service	History of American Jewish communal service, the settings in which services are offered and the factors making for effective professional performance. Usually offered every year. Mr. Reisman	JCS 216a. Philosophy of Jewish Education	Mr. Reimer Formerly JCS 217a. Examines two questions: (1) what modern classics in philosophy of education teach us about the pursuit of Jewish education and (2) what modern Jewish philosophers teach us about teaching Judaism in today's world.		
JCS 205b. Theory and Skills of Jewish Communal Service	Analyzes societal developments that affect American Jews and calls for a new ideology, priorities and programs. Usually offered in even years.		Usually offered in even years. Mr. Reimer		
JCS 206b. Informal Education and Small Groups	Mr. Reisman Two approaches to Jewish communal leadership: (1) informal, experiential education and (2) small group dynamics — leadership, group process, individual dynamics and self-awareness of Jewish	JCS 217b. Issues in Contemporary Israel and Relations with the Diaspora	Focuses on political and social changes in contemporary Israel and the changing relationship between Israel and the Diaspora. Usually offered every year. Staff		
	communal professionals. Usually offered in even years. Mr. Reisman	JCS 220b. Jewish Community Relations	An introduction to the field of Jewish community relations in the United States including a view of the development of modern Jewish defense organizations; an analysis of American Jewish community relations organizations and their		
JCS 207b. Jewish Ideology and Jewish Communal Leadership	Examines changing social forces and ideological issues for Jewish leaders i.e., issues of spirituality, Israel/Diaspora and other basic Jewish motifs. Usually offered in odd years. Mr. Reisman		constituencies; an examination of issues addressed and methods used by community relations agencies; and an introduction to professional methods in community organization. Usually offered in odd years. Messrs. Sternberg and Raab		
JCS 211a. Jewish Adaptation to American Life	How American Jews' understanding of Jewish identity and community reflect and are affected by the American milieu. A contemporary look at classic issues of assimilation, adaptation and accommodation. Usually offered in even years. Ms. Israel	JCS 221b. Jewish Education in America	An introductory course that examines how the Jewish community is organized to provide voluntary education in an open society. Types of formal and informal Jewish education, organizational structures and their communal dimensions are explored. Special attention is given to the implications of new educational settings, demographic shifts and social changes in American society.		
JCS 213b. Basic Jewish Literacy	Former title: Jewish Traditions in Communal Service. Designed to familiarize students with some of the basic terms, concepts and texts of traditional Judaism. Aims to give a deeper understanding of Judaism that would allow students greater effectiveness in dealing with a religiously diverse Jewish community. Usually offered in even years. Mr. Reimer	JCS 223b. The American Jewish Experience: Sources and Interpretations	Usually offered in even years. Messrs. Elkin and Margolis See NEJS 221b for course description. Usually offered in odd years. Mr. Sarna		

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JCS 228b. Jewish Communal Issues in the Nincties	Significant new developments in Jewish life and their implications for communal policy and programming. Topics include the changing demography of the Jewish community, pluralism and religious factionalism, women's status and roles, the Jewish media and emerging special interest populations. Usually offered in odd years. Ms. Israel	JCS 237b. Organizations: Theory and Behavior	Organizations, even when carefully designed to be effective and/or benign environments, have characteristics that sometimes confound and frustrate the most dedicated personnel. This course examines major theories of organization with special attention to the implications they hold for understanding, diagnosing and managing what goes on. By applying different analytic frameworks to real and simulated organizational dilemmas, students will gain perspectives and skills to help them productively handle the inevitable tensions of life in communal institutions.
JCS 229a. Jewish Life: Organization and Agenda	Examines how the Jewish community organizes itself. Primary focus is on the American Jewish community, with some additional attention to Jewish communities in		Usually offered in odd years. Ms. Shevitz
	other countries and international and Israeli organizations. The agenda of the organized Jewish community is addressed, especially in terms of the impact of recent societal and institutional developments on the meeting of communal needs.	JCS 238b. Practicum in Jewish Philanthropy and Fund-raising	Provides an opportunity to integrate experience in fieldwork with course work. Using case studies developed by both students and faculty, we take a problem solving approach as we explore issues of practice.
	Usually offered in odd years.		Usually offered every year.
	Ms. Israel		Ms. Kadish
JCS 234b. Curriculum Theory and Development	Students gain an understanding of the considerations and constraints of curriculum design for the formal and informal Jewish educational settings. Curriculum theory is considered as students confront the process of curriculum design and deliberation. Usually offered in even years.	JCS 239b. History and Philosophy of Jewish Philanthropy and Fund-raising	Shows that modern organized efforts of Jewish philanthropy and fund-raising are the fulfillment of Biblical and Talmudic imperatives adapted to the open, industrialized society. The interplay between Jewish thought and traditions with American social values are examined. Usually offered in odd years.
	Messrs. Margolis and Elkin		Ms. Kadish
JCS 235c. Seminar: The Culturc of Jewish Educational Settings	Provides models for considering the culture of the fieldwork agency and the community in which it functions in order to understand the change process in formal and informal Jewish educational settings. Theoretical literature is applied to a series of cases as a notion of educational leadership is developed. Usually offered in even years. Ms. Shevitz	JCS 240a. Jewish Advocacy: History, Issues and Trends	Examines the Jewish community relations organizations in North America, their early development, changing agendas and styles of operation. The major focus is on the current issues facing the American Jewish community and the strategies to address them. Usually offered in odd years. Messrs. Rabb and Sternberg
JCS 236c. Practicum: Teaching in a Jewish Setting	Applies learning theory, pcdagogic principles and research to the challenges of working in Jewish educational settings (formal and informal). Through readings, structured observations of teachers, visits to different classes and a micro-teaching laboratory, students gain awareness of the art and science of teaching while developing their own teaching abilities.	JCS 241a. Skills and Techniques in Jewish Philanthropy and Fund-raising	Provides a conceptual framework and develops a community organizational approach to organizing and implementing fund-raising campaigns for Jewish communal organizations. Usually offered in even years. Ms. Kadish
	Usually offered in odd years.	100.040	
	Ms. Shevitz	JCS 242a. Applied Skills in Jewish Advocacy	A systematic study of and active involvement in methods for organizing the media and the general, political and Jewish communities in order to affect such community relations issues as anti-Semitism. American support of Israel and so forth.
			Usually offered in even years.

106	The Hornstein Program in Jewish Communal Service			
JCS 242b. Advocaey Practicum	Focuses on specialized topics in Jewish advocacy. Analyzes specific areas of knowledge and/or techniques utilized by advocacy professionals. Topics are chosen in consultation with advocacy students. Usually offered every year. Mr. Sternberg	JCS 250d. Professional Integrative Seminar	Seeks to develop common theoretical bases for Jewish communal professionals who will work in Jewish educational and communal settings. The theory is applied to a series of practical professional tasks with the objective of enriching professional skills. The seminar meets weekly in the fall term and biweekly in the spring term. Usually offered every year.	
JCS 243b. Educational	Patterns of educational organization, staff development, supervision and school		Mr. Reisman and Ms. Shevitz	
Leadership: Administration and Supervision	management are examined in light of recent qualitative and quantitative research about educational leadership. The implications for Jewish education are analyzed. Usually offered in even years. Messrs. Margolis and Elkin	JCS 287a. Methods in Jewish Community Research	Acquaints both researchers and preprofessionals in Jewish communal service with basic research techniques. Includes readings on methods and planning applications in Jewish communal agencies. Usually offered in even years.	
ICS 248d.	Students are placed in selected Jewish		Messrs. Tobin and Berger	
NGS 2400. Methods in Jewish Communal Service	communal organizations during the first year for two days a week of field practice. They receive individual supervision from an agency field supervisor. The seminar meets weekly and focuses on work with groups, professional development and Jewish community resources and services.	JCS-SS350. Foster Seminar in Israel on Contemporary Jewish Issues	Offered every year from mid-May through mid-June in Israel in cooperation with the Center for Jewish Education in the Diaspora at The Hebrew University. Usually offered every year.	
	Usually offered every year.		Staff	
	Ms. Bloom			
		Seminar on Contemporary Jewish Issues	Required of all first-year students. During the fall semester, this seminar meets every Friday with guest speakers having a particular point of view on a range of subjects on the contemporary Jewish agenda.	

Physics

Objectives

The graduate program in physics is designed to equip students with a broad understanding of major fields of physics and train them to carry out independent, original research. This objective is to be attained by formal course work and supervised research projects. As the number of students who are accepted is limited, a close contact between students and faculty is maintained, permitting close supervision and guidance of each student.

Advanced degrees will be granted upon evidence of the student's knowledge, understanding and proficiency in classical and modern physics. The satisfactory completion of advanced courses will constitute partial fulfillment of these requirements. Research upon which theses may be based, with residence at Brandeis, may be carried out in the following areas.

Theoretical Physics

Quantum theory of fields; elementary particle physics; relativity; supergravity; string theory; quantum statistical mechanics; quantum theory of the solid state, critical phenomena and phase transitions.

Experimental Physics High energy experimental physics; atomic and molecular physics; solid-state physics; surface physics; liquid-crystal physics; light scattering; positron physics; radio astronomy; biophysical structure analysis; biophysical magnetic resonance.

Admission

As a rule, only candidates for the Ph.D. degree will be accepted. The general requirements for admission to the Graduate School apply to candidates for admission to the graduate area in physics. Admission to advanced courses in physics will be granted following a conference with the student at entrance.

Faculty

Professor John F. C. Wardle Chair: Radio astronomy. Cosmology.

Professor Laurence F. Abbott: Computational neuroscience. Neural networks.

Professor James R. Bensinger: Experimental highenergy physics.

Professor Karl F. Canter: Experimental low-energy positron physics at surfaces and disordered systems. Professor Donald L.D. Caspar (Rosenstiel Basic Medical Sciences Research Center): Structural molecular biology. X-ray crystallography.

Professor Stanley A. Deser: Quantum theory of fields. Elementary particles. Gravitation. Supergravity. Strings.

Professor Jack S. Goldstein: Astrophysics. Science and public policy. Professor Marcus T. Grisaru: Quantum field theory. Strings. Elementary particles. Supergravity.

Professor Peter Heller: Statistical physics. Spin systems.

Professor Lawrence E. Kirsch: High-energy experimental physics.

Professor Robert B. Meyer: Liquid crystals. Colloids, Polymers. Professor Hugh N. Pendleton: Mathematical physics.

Professor Alfred G. Redfield (Rosenstiel Basic Medical Sciences Research Center): Magnetic resonance. Biophysics.

Professor David II. Roberts: Theoretical astrophysics. Radio astronomy.

Professor Iloward J. Schnitzer: Elementary particle theory. Quantum theory of fields. String theory. Professor Silvan S. Schweber: History and philosophy of science. Quantum theory of

measurements.

Associate Professor Craig A. Blocker: Experimental high-energy physics.

Associate Professor Eric S. Jensen: Experimental solid-state physics.

Associate Professor Robert V. Lange: Educational software. Associate Professor Ilermann F. Wellenstein: Experimental atomic physics. Electronic impact spectroscopy.

Assistant Professor Bulbul Chakraborty: Condensed matter theory. Electronic structure of solids and disordered systems.

Assistant Professor Seth Fraden: Physics of liquid crystals and macromolecules.

Degree Requirements

Master of Arts

Program of Study.

The requirements for advanced degrees in the Department of Physics are as follows:

- One year in residence as a full-time student.
- 2. Six term courses of advanced work in physics. A thesis on an approved topic may be accepted in place of a term course.
- 3. Satisfactory performance in the qualifying examination.

Course

Qualifying

Examination.

In the first year, Quantum Mechanics (PHYS 102) and Electromagnetic Theory (PHYS 101) must be taken by all students unless they are exempted or excused. The final examinations in these courses (both fall and spring terms) serve as the written part of the qualifying examination. An oral examination given at the end of the first year completes the qualification requirements.

Requirements.

At least two graduate courses in the list below must be taken during the first three terms:(1) Statistical Physics, (2) Solid-State Physics, (3) Biophysics, (4) Elementary Particles, (5) Astrophysics, (f) Experimental Physics (PHYS 109), (7) General Relativity. Note, however, that not all of the above courses will necessarily be given each year. One term of Advanced Quantum Mechanics (PHYS 202a) is a required course for all students.

Doctor of Philosophy

- 1. Two years in residence as a full-time student.
- 2. Nine term courses of advanced work in
- 3. Outstanding performance on the qualifying examination.
- 4. Passing of an advanced examination in topics related to the student's thesis subject. This examination will normally be taken after preparatory studies in the prospective field of research.
- Doctoral thesis and Final Oral Examination.

Program of Study and Course Requirements.

Normally, first-year graduate students will elect from the 100 series; second-year students from the 200 series. To obtain credit toward residence for a graduate course taken at Brandeis, a student must achieve a final grade of B- or better in that course. Students may obtain credit for advanced courses taken at another institution provided their level corresponds to the level of graduate courses at Brandeis and that an honor grade in these courses was obtained.

Residence Requirements. A student may obtain up to one year's residence credit toward the Ph.D. requirements for graduate studies taken at another institution. No transfer residence credit will be allowed toward fulfillment of the master's requirements.

Teaching.

It is expected that all graduate students will do some undergraduate teaching during the course of their studies.

Language Requirement.

There is no foreign language requirement for either the master's or the doctoral degrees.

Advanced Examinations.

Thesis Research.

Dissertation and Final Oral Examination.

Advanced examinations will be in topics partitioned in the several areas of research interests of the faculty. Faculty members working in each general area will function as a committee for this purpose and provide information about their work through informal discussions and seminars. The advanced examination requirement consists of a written paper and an oral examination. While no original research by the student is expected, it is hoped that a proposal for a possible thesis topic will emerge. It is generally expected that the candidate will take the advanced examination in the field he/she wishes to pursue for the Ph.D. thesis, although there may be exceptions.

After passing the advanced examination, the student begins work with an advisor who guides his /her research program. The advisor should be a member of the Brandeis faculty but in special circumstances may be a physicist associated with another research institution. The graduate committee of the physics faculty will appoint a dissertation committee to supervise the student's research. The student's dissertation advisor will be the chair of the dissertation committee. The committee will recommend the student for admission to candidacy for the doctorate on recommendation of his or her advisor.

The doctoral dissertation must represent research of a standard acceptable to the faculty committee appointed for each Ph.D. candidate. The Final Oral Examination, or defense, is an examination in which the student will be asked questions pertaining to the dissertation research.

109	Physics		
Courses of Instr	uction		
Physics 101a. Electromagnetic Fheory I	Electrostatics, magnetostatics and boundary value problems. Usually offered every year. Mr. Schnitzer	Physics 107a. Experimental Particle Physics	The principles upon which experimental atomic, nuclear and particle physics are based Relativistic kinematics, interactions of energetic particles in matter, accelerators and beams, particle detectors and computer-based analysis techniques. Listelly offered in add years
Physics 101b. Electromagnetic Theory II	Maxwell's equations. Quasi-stationary phenomena. Radiation. Usually offered every year.		Usually offered in odd years. Staff
	Mr. Schnitzer	Physics 107b. Particle Phenomenology	The phenomenology of elementary particles and the strong, weak and electromagnetic interactions. Properties of particles, kinematics of scattering and decay, phase
Physics 102a. Quantum Mechanics I	Nonrelativistic quantum theory and its application to simple systems; the harmonic oscillator, the hydrogen atom. Perturbation theory.		space, quark model, unitary symmetries and conversion laws. Usually offered in even years.
	Usually offered every year.		Staff
	Mr. Pendleton	Physics 108b. Introduction to	Bremsstrahlung, synchrotron radiation, inverse Compton scattering Extended and
Physics 102b. Quantum Mechanics II Physics 103a. Statistical Physics	Systems of identical particles. Coupling of angular momenta. Scattering theory. Time-dependent perturbation theory. Semiclassical analysis of interaction of atomic	Astrophysics	compact radio sources, jets, superluminal motion Quasars and active galactic nuclei, IR to X-ray continua, spectral line formation Black holes and accretion disks.
	systems and electromagnetic waves. Usually offered every year.		Offered irregularly as demand requires.
	Mr. Pendleton		Last offered Spring 1990. Staff
	Statistical postulates and ensembles Behavior of nonideal gases. Correlation functions, fluctuation theorems, Wiener-Khintchine theorem, generalized Nyquist relations. Mean-field theories of phase transitions; effect of fluctuations.	Physics 109a. Advanced Laboratory I	Methods and techniques of experimental research. Usually offered every year. Mr. Meyer
	Usually offcred every year. Ms. Chakrahorty	Physics 109b. Advanced Laboratory II	Methods and techniques of experimental research.
Physics 104a. Solid-State Physics I	The formal description of periodic systems The vibrational and electronic properties of solids. Band structure and the Fermi surface The transport and optical properties of solids.	Laboratory II	Usually offered every year. Mr. Meyer
	Usually offered every year. Ms. Chakraborty	Physics 110a. Mathematical Physics	Complex variables; Fourier and Laplace transforms; special functions, partial differential equations.
Physics 104b. Solid-State Physics II	Thermal, electric and magnetic properties of solids. Lattice vibrations. Specific heat Structural probes. Fermi surfaces. Selected topics in superconductivity and		Offered irregularly as demand requires. Mr. Pendleton
	ferromagnetism. Usually offered every year. Staff	Physics 113a. First-Year Tutorial I	A review of physics from the most elementary topics to those treated in other first-year graduate courses. The environment for an oral qualifying examination is reproduced in the tytorial.
	Maii		the tutorial. Usually offered every year.
			Mr. Bensinger

110	Physics		
Physics 113b. First-Year Tutorial II	A continuation of Physics 113a. Usually offered every year. Staff	Physics 204b. Condensed Matter II	A continuation of PHYS 204a. Usually offered in odd years. Staff
Physics 137b. Twentieth- Century Physics	Explores developments in physics during the 20th century from a historical perspective paying particular attention to the wider context in which these advances took place. Offered irregularly as demand requires. Last offered Fall 1987.	Physics 208a. Cosmology	Friedman big bang models, physical process in the early universe, galaxy formation, 3°K background radiation, present density of the universe, classical observational tests, application of radio astronomy to cosmology Usually offered every fourth year.
	Staff		Staff
Physics 152b. (BIOP 152b) Biological Assembly	Physical principles in the construction of biological structures: forces, equilibria, symmetry and control mechanisms. Analysis of the structure and assembly of viruses, membranes and cellular organelles.	Physics 210a. Particle Seminar I	Analysis of important recent developments in particle physics. Usually offered every year. Mr. Deser
	Usually offered every third year. Mr. Caspar	Physics 210b. Particle Seminar II	A continuation of PHYS 210a. Usually offered every year.
Physics 200a. General Relativity I	Introduction to current research and problems in gravitational physics. Physical and mathematical background are provided as		Mr. Schnitzer
	needed, but emphasis is on recent literature. Usually offered in odd years. Staff	Physics 211a. Computational Physics	Numerical differentiation and integration. Curve fittings. Numerical solution of elliptic, parabolic and hyperbolic differential equations. Molecular dynamics. Monte Carlo simulation. Monte Carlo renormalization
Physics 200b. General Relativity II	Advanced topics in classical and quantum gravity and supergravity. Emphasis is on recent literature.		group technique. Usually offered in odd years. Staff
	Usually offered every fourth year. Staff	Physics 212a. Condensed Matter Seminar I	Analysis of important recent developments is condensed matter physics.
Physics 202a. Quantum Mechanics III	Nonrelativistic field theory and relativistic quantum mechanics. Graphical version of time-dependent perturbation theory Application of group theory to quantum		Usually offered every year. Staff
	mechanics. Usually offered every year.	Physics 212b. Condensed Matter Seminar II	A continuation of PHYS 212a. Usually offered in even years.
	Mr. Deser		Staff
Physics 202b. Quantum Fields	Introduction to relativistic quantum field theory. The Feynman diagram perturbative expansion is employed to discuss gauge theories and, in particular, the standard model of fundamental interactions.	Physics 213a. Advanced Examination Tutorial I	Supervised preparation for the advanced examination. Usually offered every year.
	Usually offered every third year.		Staff
	Staff	Physics 213b. Advanced	Supervised preparation for the advanced examination.
Physics 204a. Condensed	Topics in condensed matter theory.	Examination Tutorial II	Usually offered every year.
Matter I	Usually offered in odd years.		Staff

111	Physics		
Physics 240b. Biophysical Research	See BIOP 200b for description. Usually offered every year.	Physics 305a. Liquid Crystals I	Recent advances in the physics of liquid crystals and related systems such as microemulsions, colloidal suspensions and polymer solutions.
	Staff		Usually offered every year.
Physics 301a. Astrophysics	Advanced topics and current research in astrophysics are discussed.		Mr. Meyer
Seminar l	Usually offered every year.	Physics 305b.	A continuation of PHYS 305a.
	Mr. Wardle	Liquid Crystals II	Usually offered every year.
	ADVIVO 004		Mr. Fraden
Physics 301b. Astrophysics	A continuation of PHYS 301a.		
Seminar II	Usually offered every year.	Physics 311a. Mathematical	The mathematics and physics of the quantum string theory of elementary particles.
	Mr. Roberts	Physics II	Usually offered every fourth year.
Physics 302a. Particle	Seminar covers latest advances in elementary particle physics. Includes student		Staff
Seminar III	presentations and invited speakers. Usually offered every year.	Research Courses	
	Mr. Bensinger	Physics 405d. Experimental	Specific sections for individual faculty members as requested.
Physics 302b. Particle	A continuation of PHYS 302a.	Elementary Particle Physics	Staff
Seminar IV	Usually offered every year.	DI + 400 I	
	Mr. Kirsch	Physics 408d. Computational Neuroscience	Mr. Abbott
Physics 303a. Positron Seminar I	Seminar covers latest developments in atomic, solid-state and surface physics as studied using positron techniques. Includes student presentations and invited speakers. Usually offered every year.	Physics 409d. Theoretical Elementary Particle Physics	Specific sections for individual faculty members as requested. Staff
	Mr. Canter	Physics 416d. Statistical Physics	Mr. Heller
Physics 303b.	A continuation of PHYS 303a.		
Positron Seminar II	Usually offered every year.	Physics 417d. Theoretical	Specific sections for individual faculty members as requested.
	Mr. Canter	Solid-State Physics	Staff
Physics 304a. Solid State Seminar l	Analysis and discussion of recent important developments in solid-state physics.	Physics 421d. Relativity	Mr. Deser
Semmai 1	Usually offered every year.		
	Ms. Chakraborty	Physics 422d. Mathematical Physics	Specific sections for individual faculty members as requested.
Physics 304b.	A continuation of PHYS 304a.		Staff
Solid State Seminar II	Usually offered every year.	Physics 426d.	Specific sections for individual faculty
	Ms. Chakraborty	Astrophysics	members as requested.
			Staff
		Physics 429d. Structural Biology	Mr. Caspar

112	Physics			
Physics 430d. Experimental Solid-State Physics	Specific sections for individual faculty members as requested. Staff	Physics 432d. Experimental Atomic and Molecular Physics	Mr. Wellenstein	
Physics 431d. Experimental Condensed- Matter Physics	Specific sections for individual faculty members as requested. Staff	Physics 436d. Biophysics	Mr. Redfield	

Politics

Objectives

The graduate program in politics, leading to the degree of Doctor of Philosophy, emphasizes comprehensive professional training by stressing both the fundamentals of the discipline grounded in the study of political thought and institutions and the requirements of method and analytical skills.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. Normally, the student's undergraduate training must be in a field of social sciences to be considered for admission to this program. Applicants are expected to take the Graduate Record Examination.

Faculty

Professor Seyom Brown Chair: International relations. American foreign policy.

Professor Doi Jeffrey B. Cor Abramson: poli Political theory. Asia Constitutional law. Am

Professor Robert J. Art: International relations. American foreign policy.

Professor Donald Hindley: Comparative politics. Southeast Asia; Latin American politics.

Professor **Mark L. Hulliung**: Political theory. Professor Martin A. Levin Director, Gordon Public Policy Center: American politics. Urban politics.

Professor Ruth S. Morgenthau: Comparative politics. Africa.

Professor Peter Woll: American politics. Administrative law. Associate Professor Steven L. Burg: Comparative politics. U.S.S.R. Eastern Europe.

Associate Professor R. Shep Melnick: American politics. Public law and regulation. Associate Professor Sidney M. Milkis: American government.

Associate Professor Ralph Thaxton: Comparative politics. Peasants and revolution. Assistant Professor James F. Hollifield: Comparative politics. Political economy.

Assistant Professor Ethan Kapstein: International relations. International political economy.

Degree Requirements

Master of Arts

Normally, no one will be accepted into the program who is not a doctoral candidate. However, the M.A. degree may be awarded upon satisfactory completion of one year of residence with a minimum of six courses, the submission of a research paper approved by two members of the politics department faculty and either the demonstration of proficiency in a foreign language or satisfactory completion of two term courses of statistics or satisfactory completion of the scope and methods seminar as described under the Ph.D. research tools requirements below. (Courses taken in language, statistics or scope and methods will not be counted toward the six courses required for the M.A. degree.)

Doctor of Philosophy

Students should note certain special features of the program, in particular, a) instruction in small seminars under close faculty supervision, b) supervised independent study facilities within the program, c) supervised teaching assistantships, d) opportunities for study in the consortium of universities in the Boston area and e) the opportunity to incorporate work in related and relevant fields, e.g., economics, anthropology, philosophy. Each student is assigned to a program advisor who will help plan a professional and pertinent program of study. A continuity of faculty direction is ensured throughout the program with allowance for shifts in curricular interest.

Program of Study.

The student must complete two years in residence and a minimum of 12 term courses. Students with an M.A. in political science from other institutions may petition at the end of one year to have their previous graduate courses accepted for Brandeis credit; this may relieve them of as much as a year of residence requirement. (However, they must satisfy all Brandeis requirements: distribution of curriculum, language, etc.) For distribution. each graduate student will be required to take three of the following fields: American government, comparative government, international relations, political theory or two of the above plus a category of study at the graduate level in another program of the University, as shall be judged valid for the student's program by this program.

Within each subfield chosen, students are expected to have a broad knowledge of the major theoretical and analytical approaches, a more intensive familiarity with one or more functional areas of the subfield and special expertise in particular geographic areas, policy issues and/or historical periods. The requirements for a student majoring in each subfield are somewhat more extensive than those for a student choosing it as a second or third field. The specific requirements for each subfield may be obtained from the politics program.

The standard work load for full-time students is at least three courses in each term of their first two years of study. Fourth courses and audits are encouraged, but the load is deliberately set so that the student may supplement his/her regular course work with independently motivated reading and scholarship. Reading courses will not be offered to first-semester students and will be discouraged generally during the first year. By the end of the first year, students should have identified their major and at least one of their minor fields of interest and should make this known to their advisor and the Graduate Studies Chair.

Research Tools Requirement. Prior to admission to Ph.D. candidacy, each student is required to: (1) pass with a graduate grade (B- or better) the politics program's Seminar in Scope and Methods. Credit for this one-term course may be counted toward fulfillment of the Ph.D. course requirements. A similar course taken elsewhere may be used to fulfill this requirement, subject to the approval of the Graduate Committee. (2) Either a) pass a language examination (normally administered within the program) designed to test for a reading knowledge of a foreign language sufficient to conduct doctoral dissertation research or b) pass with a B- or better course work in statistics approved by the graduate studies chair.

Neither courses taken in conjunction with the language examination nor statistics courses may be counted for course credit toward the Ph.D.

Evaluation of First Year. At the end of each student's first year in the graduate program, there will be a consultation between the student and three members of the program to evaluate the student's academic progress and help plan the student's subsequent work.

Research Paper.

Each second-year graduate student is required to submit a high-quality research paper, which must be approved in its final version by two members of the program (appointed by the graduate advisor in consultation with the student) before the student will be allowed to take the comprehensive Ph.D. qualifying examinations.

Candidacy for the Ph.D.

A student may be admitted to candidacy for the Ph.D. degree upon completing the course and research paper requirements, passing the qualifying examination, fulfilling the methodology requirement and obtaining program approval of the subject and preliminary précis of the dissertation. Normally at the end of the fourth term or early in the fifth, a formal oral and written examination for candidacy for the Ph.D. will be given covering the student's three fields but with emphasis on the subfield(s) in which the student has done the most work. Examinations are to be taken in one of three periods, each four weeks long, especially designed by the program's graduate director each year for this purpose (early fall term, early spring term and late spring term). Each student will take all three written field examinations (one each week) and a follow-on oral examination during one of these designated examination periods. Students are examined orally in their three fields simultaneously.

Each student must complete the Ph.D. qualifying examinations by the end of his/her fifth term in the program and must submit a dissertation prospectus by the end of the sixth term. Any extension must be granted specifically by the Graduate Committee.

Dissertation and Defense. The dissertation will be completed under the supervision of an appropriate member of the program faculty. The dissertation proposal must be sponsored by a program committee of at least two members appointed by the program chair in consultation with the Graduate Committee. It is assumed that the writing of the dissertation will take at least one year and, barring exceptional circumstances, not more than two and one-half years. The student must successfully defend the dissertation at a Final Oral Examination conducted by his/her two program supervisors and another faculty member from outside the program or from another university.

Teaching Assistantships. As determined by funds and undergraduate enrollments, the program compensates students for teaching assistant work in an amount customarily based on the type and amount of work performed. First-year students do not normally receive teaching assistantships. It is the policy of the program that teaching experience is a normal and necessary part of the graduate training program and that ideally all students should have this opportunity.

Courses of Instruction

Seminars for Graduate Students		Politics 205a. Seminar: American Politics	An examination of the approaches, concepts and theories in the field of American politics.	
Politics 201b. Seminar: Political Research and Analysis	Provides students with an introduction to research methods and techniques of analysis appropriate for processing and analyzing political data. The emphasis is on teaching		Usually offered in even years. Staff	
	students to understand and critique various methodologies used in political science, including historical/structural analysis, survey research, statistical analysis and formal theory. The first section of the course is devoted to some preliminary reflections on the study of politics, particularly the scientific method, ethical and philosophical issues (e.g., a critique of behavioralist and positivist approaches) and the criteria for good theory. Introduces students to the basic concepts and	Politics 205b. Seminar: Advanced Topics in American Politics	Provides graduate students an opportunity to engage in research and discussion of selected issues in American politics. Each term it deals with a different topic in greater depth than is possible in the context of the program's field seminar in this area. Usually offered in odd years. Staff	
	uses of statistics, particularly correlation, regression and problems of causal inference. Usually offered in even years. Staff	Politics 206a. Seminar: Political Theory	An examination of the approaches and concepts in the field of political theory. Usually offered in odd years.	
			Staff	
Politics 203a. Seminar: Comparative Politics	An examination of the approaches, concepts and theories of the field of comparative politics. Usually offered in even years. Staff	Politics 206b. Seminar: Advanced Topics in Political Theory	Provides graduate students an opportunity to engage in research and discussion of selected issues in political theory. Each term it deals with a different topic in greater depth than is possible in the context of the program's field seminar in this area.	
			Usually offered in even years.	
Politics 203b. Seminar: Selected Topics in Comparative	Provides graduate students an opportunity to engage in research and discussion of selected issues in comparative politics. Each term it deals with a different topic in greater depth	Sominara for Cradus	Staff	
Polities	than is possible in the context of the program's field seminar in this area.	Seminars for Graduate Students and Advanced Undergraduates		
	Usually offered in even years. Staff	Politics 215b. Seminar: Constitutional Law and Theory	An advanced research seminar on selected issues of constitutional law. Usually offered in even years.	
Politics 204a. Seminar: International	An examination of the approaches, concepts and theories in the field of international politics.		Mr. Woll	
Relations Theory	Usually offered in odd years. Staff	Politics 218b. Research Seminar: Elections in Theory and	Provides students with an opportunity to research a topic of interest on elections in the United States. Attention is paid to various theories that have been offered to explain voting, as well as the basic empirical	
Politics 204b. Seminar: Selected Topics in International Relations	Provides graduate students an opportunity to engage in research and discussion of selected issues in international relations. Each term it deals with a different topic in greater depth than is possible in the context of the program's field seminar in this area.	Practice	methodologies used to investigate political behavior. In consultation with the instructor, each student undertakes the completion of a research project based on a computer analysis of recent elections in the United States. Usually offered in odd years.	
			Mr. Milkis	
	Usually offered in even years.		MI, MIIKIS	

Politics 222b. Seminar: Policy Analysis and Policy Implementation

Political economy — the interface of economics and political science. Uses concepts of economics and political science to develop better analysis of public sector issues in order to ameliorate social problems. Integrates formal techniques of analysis (such as cost-benefit analysis, decision theory, modeling), with a concern for political feasibility and the constraints of implementation, especially those flowing from the nature of organizations. Problem areas are chosen to illustrate the dual dilemmas in imperfect public interventions.

Usually offered every year.

Mr. Levin

Politics 223a. Seminar: Government, Business and American Politics

Examines the interaction of economics and politics in the American political system. A good deal of emphasis is placed on the politics of regulation and the philosophical and historical context in which government-business relations have developed. Using environmental and consumer regulation as examples, the course examines the prospects for regulatory reform and the effects on the public interest of political efforts to curb the impact of federal intervention in society.

Usually offered in odd years.

Mr. Milkis

Politics 231b. Seminar: Advanced Topics in Soviet Politics

Provides advanced undergraduate and graduate students with an opportunity to engage in research and discussion of selected issues in Soviet domestic politics or foreign policy.

Usually offered in even years.

Mr. Burg

Politics 247b. Seminar: The Modern Chinese Revolution

Provides an in-depth exploration of the origins, process and consequences of the modern Chinese revolution. Focuses specifically on Western social science theories and interpretations of the revolution. Provides a comprehensive perspective on revolution in 20th-century China and revolutionary movements in other parts of the globe.

Usually offered every year.

Mr. Thaxton

Politics 248a. Seminar: Contemporary Chinese Politics

Provides a broad and in-depth understanding of key issues in contemporary Chinese politics — China after 1949. The course is especially concerned with the role of the state in promoting economic development, social betterment, political stability and justice.

Usually offered every year.

Mr. Thaxton

Politics 252a.
Seminar: The
Political
Economy of
Advanced
Industrial
Democracies

Designed to introduce students to the history and theory of political economy, giving particular attention to the relationship between capitalism, socialism and democracy. We also devote considerable time to the study of the development of the political economies of Western Europe and North America since 1945. This study seeks to determine the scope and role of government in the economies of the advanced industrial democracies.

Usually offered every year.

Mr. Hollifield

Politics 254b. Seminar: Comparative Public Policy

Introduces the student to the basic theories and concepts used in order to compare public policies cross-nationally. An assumption of the seminar is that the analysis is concerned with national systems and less concerned with international systems. Our main concern is to use policy analyses within systems.

Usually offered every third year.

Staff

Politics 257a. Seminar: Politics and Society in Western Europe

Treats Western Europe as a case study in political development and a testing ground for theories of political support and legitimacy. It is designed to deal with three major topics relating to the political development of Western Europe: (1) the transition from feeudalism and the creation of the modern capitalist state, (2) the processes of legitimation of the institutional order during and after the industrial revolution and (3) the accommodation of industrial workers and the rise and fall of class politics.

Usually offered in even years.

Mr. Hollifield

Politics 258a. Seminar: Political Participation

An examination of the major models or conceptualizations of participation and their ideological or political underpinnings. Explores the variety of actual forms of participation and "regime-type" and attempts to differentiate "participation" from other forms of political behavior, such as "mobilization" or "involvement," thereby distinguishing between "citizens" and "subjects."

Usually offered in even years.

Mr. Burg

Politics 266b. Seminar: Issues in International Political Economy

Selected theories of international relations are used to analyze current problems in international political economy. Issues such as global debt, Third World development, North-North and North-South economic relations and resource politics are examined in depth.

Usually offered every year.

Mr. Kapstein

Politics 274b. Problems of National Security	An analysis of current issues in national security policy through examination of basic theories on the role and utility of force in international relations. Topics include nuclear deterrence, force planning and budgeting arms control, force projection in the Persian Gulf, proliferation and the NATO alliance.	Politics 302a and b. Readings in Politics	Specific sections for individual faculty members as requested. Offered every year. Staff
	Usually offered every year. Mr. Art	Politics 400d. Dissertation Research	Independent research for the Ph.D. degree. Specific sections for individual faculty members as requested.
Politics 279a. Seminar: The Politics of Food Security	Why is there hunger in a world full of grain? The issue is examined from the international, national, regional and local levels. Why is economic growth not enough to end famine? What policies and programs promote adequate production and equitable distribution of food supplies? Readings focus on international as well as national efforts to secure access to food at acceptable prices. How food policy is formulated and affects the rise and fall of governments is examined in case studies.	Other advanced und of the graduate stud	Staff lergraduate courses may, subject to the approval lies chair, be taken for graduate credit.

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Politics

Usually offered every year.

Ms. Morgenthau

Psychology

Objectives

The graduate program in psychology leads to the degree of Doctor of Philosophy. The goal of the program is to develop competent research psychologists and teachers who will become contributors to knowledge in psychology. Toward this end, an emphasis is placed on research activity, starting in the first term of graduate study. The program of study reflects a belief that the student should develop an area of research specialization and also be exposed to a range of topics in general psychology. Dissertation supervision is available in the following areas: sensation, perception, memory, learning, thinking, comparative, developmental, personality, psychopathology, social psychology, linguistics and cognitive science.

The psychology department also offers a program leading to the degree of Doctor of Philosophy in Psychology with specialization in linguistics and cognitive science. This program focuses on mental representation, in particular the representation and processing of language. The program is designed to equip students with a broad understanding of contemporary linguistic theory and its relationships to other areas of psychology. The goal of the program is to train students to carry out independent, original theoretical or experimental research and bring their research to bear on wider issues.

Admission

The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to this area of study.

An undergraduate major in psychology is not required. Students with inadequate preparation may make up their deficiencies during their first year but without residence credit. Students are admitted on a competitive basis, which includes evaluation of previous academic records, recommendations and results of the Graduate Record Examination (Aptitudes and Psychology Achievement Tests).

Applications to linguistics and cognitive science should specifically mention interest in this program.

Faculty

Associate Professor Malcolm W. Watson Chair: Developmental psychology.

Professor Teresa M. Amabile Chair, Program in Social/ Developmental Psychology: Social psychology. Creativity.

Professor Jane B. Crimshaw: Linguistics. Language acquisition. Syntactic and lexical theory. Professor Ray S. Jackendoff Chair, Linguistics and Cognitive Science: Linguistics. Semantic theory. Music. Consciousness.

Professor Raymond Knight: Clinical psychology. Experimental psychopathology.

Professor James R. Lackner Director, Spatial Orientation Laboratory: Human experimental psychology. Psycholinguistics. Professor Joan Maling: Linguistics. Syntactic theory. Historical syntax. Metrics.

Professor Ricardo B. Morant Chair Program in Experimental/ Physiological Psychology: Experimental psychology, Perceptual mechanism. Sensation and perception.

Professor Alan S. Prince: Phonological theory. Metrics.

Professor Robert Sekuler: Visual perception. Aging. Professor James Todd: Layout and motion perception.

Professor **Arthur Wingfield:** Human memory. Cognitive processes.

Professor Leslie A. Zebrowitz: Social psychology. Person perception.

Professor Edgar Zurif: Neurolinguistics. Psycholinguistics. Adjunct Professor Ashton Graybiel

Adjunct Professor Marcel Kinsbourne

Adjunct Professor Zick Rubin: Social psychology. Interpersonal relationships.

Adjunct Professor Leonard Saxe: Social psychology.

Associate Professor Maurice Hershenson: Visual space perception. Visual information processing.

Associate Professor Marjorie Lachman: Life-span development, Adult personality. Associate Professor Jerome Wodinsky: Comparative psychology. Learning theory. Sensory physiology.

Assistant Professor D. Lynn Halpern: Sensory physiology. Visual and auditory psychophysics.

Assistant Professor Steven Kramer: Infant perception and development.

Assistant Professor Moira Yip: Autosegmental and metrical phonology. Tone systems.

Lecturer with rank of Assistant Professor Joseph Cunningham: Developmental psychopathology.

Degree Requirements

Doctor of Philosophy

Program of Study.

Although there is a two-year minimum residency requirement, four years of full-time graduate study are usually required for the Ph.D. The student is expected to carry the equivalent of 16 credit units per term during residency.

Research.

Each student will devote one-quarter of his/her time to research the first term of the entering year. For all subsequent terms, students shall devote a minimum of one-half time to research

Research Reports.

Students will submit reports on their research for the preceding year, in journal form, in time to permit evaluation of the first project by the end of the third term, and of the second project by the end of the fifth term. Satisfactory completion of the research projects is required for continuation in the program. Students who have satisfactorily completed the research requirements will be permitted to continue their work toward the doctorate with no formal requirement of a master's degree.

Course Requirements. Entering students will take PSYCH 210a, PSYCH 315d and two advanced courses in the first term of residence, one advanced course and PSYCH 210b in the second term. After that they shall take two advanced courses each term in the second year and one each term thereafter until admitted to candidacy for the doctorate. Each term a student must take at least one graduate level course or seminar (100-level or above) that is not an Independent Readings or Research course. Only selected 100-level courses, determined by the psychology program, will count as advanced, graduate-level courses. Graduate level course selection will not be restricted to the psychology program but will be arranged by the student in consultation with the faculty advisor.

Qualifying Examinations. Before being admitted to candidacy for the doctorate, each student must also pass a qualifying examination. During the student's third year, he/she will be examined in the historical, theoretical and empirical literature related to the student's area of specialization, broadly conceived. The chair of the program, in consultation with the student and advisor, will appoint a three-member committee to administer the qualifying examination. The examination may be in either oral or written form. A student may petition the program to take the examination a second time if necessary.

Breadth Requirement. All graduate students must demonstrate breadth in the field of psychology before being admitted to candidacy for the Ph.D. This breadth requirement is fulfilled by demonstrating competence in at least six of the nine areas listed below. The requirements may be satisfied in any of three ways:

a. by having completed an undergraduate or graduate course in that area,

b. by completing an undergraduate or graduate course offered in that area at Brandeis.

c. by successfully passing the equivalent of any undergraduate final examination for that course.

Of the six courses, a minimum of two should be taken from areas in Group A and a minimum of two from Group B.

Group A

1. Physiological/Sensory Processes

2. Perception

3. Learning/Comparative

4. Cognition/Memory

5. Cognitive Science/Linguistics

Group B

1. Developmental

2. Social

3. Personality 4. Abnormal

Teaching Assistant Requirements. Each student must work as a teaching assistant for a minimum of four courses, including the course, Introduction to Psychology. Other courses in which the teaching assistant requirement may be fulfilled include: statistics, experimental, physiological, sensory processes, perception comparative, learning cognitive processes, personality, abnormal developmental and social. Teaching assistant assignments will be based on course enrollments, with priority given to Introduction to Psychology, Statistics and Experimental Psychology.

Language Requirement. There is no foreign language requirement.

Admission to Candidacy.

A student may be admitted to candidacy for the doctorate upon fulfilling the above requirements.

Dissertation and

Following the completion of all examinations, the student will prepare a prospectus of the proposed dissertation study in consultation with a faculty dissertation sponsor. The prospectus may be based on preliminary research conducted prior to the student's admission to candidacy for the doctorate. Upon approval by the faculty of the program, a dissertation committee of three or more members will be appointed by the program chair, including the dissertation sponsor as chair of the committee. The dissertation sponsor will be responsible for advising the student throughout the performance of his or her work, in consultation with the remaining members of the committee at appropriate times in the course of the work. From time to time, the committee will report the student's progress to the program faculty.

The dissertation should provide evidence of originality, scholarship and research ability. It should be a contribution to knowledge, ordinarily an experimental investigation, but not necessarily so. Upon submission to the chair of the program of a copy of the dissertation, signed by all members of the dissertation committee and one member from outside of the University, and a successful defense of the dissertation before all members of the program, the award of the Ph.D. will be recommended to the Faculty Council of the Graduate School.

Master of Arts

Students in the Ph.D. program may petition for a Master of Arts degree upon completion of the following requirements: (1) one year minimum residency, (2) acceptable master's thesis, (an acceptable first-year research report will count as a master's thesis) and (3) completed breadth requirements.

Ph.D. in Psychology with Specialization in Linguistics and Cognitive Science.

This program focuses on the development of formal theories of linguistic representation. It emphasizes the unity behind approaches to mind within linguistics and cognitive psychology, with attention to the important contributions of computer science and philosophy. Application should specifically mention an interest in this program.

The degree requirements are as given above, except in the following respects:

Course Requirements.

a. All students will take the following courses in their first year:
Syntax
Phonology
Research Seminar (for credit)
Seminar in Cognitive Science
One of: Topics in Syntax, Topics in
Semantics, Topics in Phonology

b. All students will take the following courses every year until they are admitted to candidacy: Seminar in Cognitive Science Two of: Topics in Syntax, Topics in Semantics, Topics in Phonology

c. Beginning in the second term every student will take a minimum of one research course each term. As part of the research requirement students attend the research seminar every year.

All programs must be approved by the graduate advisor.

Breadth Requirements.

In addition to the areas covered by the course requirements, students must demonstrate competence in four areas, two from Group A and two from Group B.

Group A: Psycholinguistics; neurolinguistics; language acquisition; historical/comparative linguistics.

Group B: Cognitive psychology; statistics (graduate level); logic/philosophy of mind; computer science/artificial intelligence.

Courses offered for satisfaction of the breadth requirement must be approved by the linguistics and cognitive science faculty.

Research Reports.

Students will submit reports on their research in time to permit evaluation of the first project by the end of the third term and the second project by the end of the fifth term.

Satisfactory completion of the research projects is required for continuation in the program.

Courses of Instruction

Psychology 120b. Man in Space	Topics include a) how orbital flight is achieved, b) spacecraft life support systems, c) circulatory dynamics, d) sensory-motor control and vestibular function in free fall and e)the physiological and psychological adaptations necessary in space flight and how astronauts must readapt on return to Earth. Usually offered every year. Mr. Lackner	Psychology 139a. Advanced Topics in Social Psychology	Provides students with detailed information about theories and special topics of research in social psychology. Although topics vary from year to year, this course may not be repeated for credit. Usually offered every year. Mr. Fletcher
Psychology 130b, Life-Span Development: Adulthood and Old Age	Seminar on advanced topics in life-span developmental theory and methodology. Substantive emphasis is on cognitive and personality changes that occur in the second half of life. Usually offered in odd years. Ms. Lachman	Psychology 145b. Aging in a Changing World	Psychological issues related to the aging processes are examined in a multi-disciplinary perspective. Social, biological, political, economic and historical/cultural factors that affect and are affected by psychological aging are considered. Topics include intellectual functioning, mental illness, memory loss, personality changes, social support, coping with stressful life events and physiological changes in later life. Usually offered in odd years.
Psychology 132b. Cognitive Development	A comparison of Piaget's theory of cognitive development and research with other major theories and research in cognitive		Ms. Lachman
	development. Special emphasis is given to the development of causal thinking, symbolization, logical thinking and social cognition. Usually offered in even years.	Psychology 150b. Organizational Psychology	Covers the fundamentals of industrial/organizational psychology, including the topics of leadership, work motivation, organizational innovation, corporate culture, personnel selection, job evaluation and group dynamics.
	Mr. Kramer		Usually offered in even years.
			Ms. Amabile
Psychology 135b. Seminar in Social Cognition	Considers the perception of traits and emotions from face, voice and gestural cues, with attention to stereotyping, accuracy and cultural and developmental differences. Usually offered in even years. Ms. Zebrowitz	Psychology 153a. (LING 153a.) Consciousness	Explores the nature of conscious awareness and its relation to the mind and the body. After going through the philosophical history of the mind-body problem, we discuss the role of consciousness in cognitive science. Usually offered every third year.
Psychology 136a. Advanced Topics	Provides students with detailed information about theories and special topics of research		Mr. Jackendoff
in Developmental Psychology	in developmental psychology. A different topic is selected each year. Usually offered every year. Messrs. Watson and Kramer	Psychology 154a. Human Memory	Presents a systematic analysis of current memory research and theory as it sheds light on normal memory, memory deficits following cerebral damage and in normal aging.
Psychology 138b.	Integrates principles of human development		Usually offered every year.
Development of Play, Art and Creativity	and intrinsic motivation toward an understanding of how artistic creativity develops.		Mr. Wingfield
Creativity	•	Psychology 155a. Seminar in Visual	Seminar discusses major issues in perception.
	Usually offcred in even years.	Space Perception	U
	Ms. Amabile and Mr. Watson	Space Perception	Usually offered every year.

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Psychology 156b. Perceptual Development	Considers recent theories and experiments that investigate perceptual development of young infants. What does the infant know and when does he first know it? Usually offered in even years. Mr. Morant	Psychology 165a. Seminar in Experimental Psychopathology	Focuses on how researchers study deviant behavior and what they have learned about the causes and life courses of psychopathology. Focuses on two broad classes of psychopathology — sexual aggression and schizophrenia — and examines the interplay of biological and environmental variables that cause and sustain disordered behavior.
Psychology 157b. Models of Human and Machine Vision	Considers how a visual analysis of patterns of light can be used to determine the structures and movements of objects in the environment. An integrative approach to this problem is		Usually offered every third year. Mr. Knight
	adopted, which surveys current research and theory from perceptual psychology, neurobiology and artificial intelligence. Usually offered in even years.	Psychology 167b. Schools of Psychotherapy	Theories and techniques of several schools of psychotherapy and behavior modification are considered. The theories of personality, methods of intervention, goals of therapy and
	Mr. Todd		relevant research are emphasized. Usually offered every year.
Psychology 158b. Visual	Covers current issues in spatial and binocular visual research. Modeling efforts in these		Mr. Knight
Psychophysics	areas are evaluated in light of known neurophysiology of the visual system. Usually offered in even years.	Psychology 168a. The Psychology of Creativity	The purpose of this course is to (1) explore the foundations of modern theory and research on creativity and (2) examine methods of stimulating creative thought and
	Ms. Halpern		expression. Usually offered every year.
Psychology 160b. Seminar on Sex Differences	Examines societal sex roles and beliefs about sex differences in light of evidence bearing upon (1) actual sex differences in ability		Ms. Amabile
	and/or personality, (2) biological vs. social explanations for sex differences, and (3) motivational and cognitive biases in the perception of group differences. Usually offered every year.	Psychology 169b. Disorders of Childhood	Issues of theory, research and practice in the areas of child and family psychopathology and treatment are reviewed in the context of normal developmental processes.
	Ms. Zebrowitz		Usually offered in even years. Mr. Cunningham
Psychology 161a. Clinical Psychology Practicum I	Students must enroll in this course in order to enroll in PSYC 161b and should only enroll in this course if they are also able to enroll in 161b in the next semester. Students do clinical work eight hours per week and relate their experience to empirical	Psychology 172a. Temporal Patterning of Behavior	Concerns the way animals control and perceive spatially directed posture and movements. Topics range from the definition of optical, mechanical and acoustic information about orientation to how body orientation and motion with respect to these
	and literary readings in weekly group supervision.		referents may be represented. Usually offered in odd years.
	Usually offered every year.		Mr. Lackner
	Mr. Cunningham		
Psychology 161b.	A continuation of PSYC 161a.	Psychology 173a. (LING 173a.)	See LING 173a. for description.
Clinical Psychology Practicum II	Usually offered every year.	Psycholinguistics	Usually offered in even years. Mr. Zurif
	Mr. Cunningham		

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Psychology 175b. Seminar in Sensory Physiology	Concentrates on coding the visual and auditory systems, beginning with a detailed study of well-established anatomy and physiology and continuing with a discussion of more recent findings in each area. The	Psychology 202b. Seminar in Human Spatial Orientation	Usually offered in even years. Mr. Lackner
	readings are designed to link neurophysiological evidence with psychophysical observations. Usually offered every year. Ms. Halpern	Psychology 203a. Seminar in the Neuropsychology of Language	Considers theories of brain-language relations Usually offered in odd years. Mr. Zurif
Psychology 182b. (ANTH 161b.) Culture and Cognition	See ANTH 161b. for description. Usually offered every year. Mr. Murray	Psychology 205a. Seminar in Perceptual Development	A detailed analysis of recent experimental and theoretical literature on perceptual development. Usually offered in odd years. Mr. Hershenson
Psychology 183b. (ANTH 155b.) Psychological Anthropology	See ANTH 155b for description. Usually offered every fourth year. Mr. Saler	Psychology 206b. Computer Methods in Psychological Experimentation	Usually offered in even years. Mr. Todd
Psychology 184b. (PHIL 141b.) Philosophy of Psychology	See PHIL 141b. for description. Usually offered in even years. Mr. Samet	Psychology 207b. Seminar in Perception	Examines the various aspects of visual information by which objects and events in three-dimensional space are perceived by human observers. Current research in both psychology and artificial intelligence is considered.
Psychology 193b. Tests and Measurements	Covers test theory, types of measurement, the theory and measurements of reliability and validity and test construction. The measurement of intelligence, achievement and personality are also considered.		Usually offered in even years. Mr. Todd
	Usually offered in odd years. Mr. Knight	Psychology 208a. Seminar in Cognitive Sciences	Discusses philosophical foundations of cognitive science: what constitutes a mental representation and how representation is involved in processing and brain function.
Psychology 195a. Introduction to Psychological Theory	Associationism, structuralism, functionalism, gestalt, behaviorism, psychoanalysis and their modern derivatives. Emphasis is on the nature of explanation.		Usually offered every year. Mr. Zurif
	Usually offered every year. Mr. Hershenson	Psychology 209a. Advanced Seminar in Measurement	Usually offered every third year. Staff
Psychology 197a. (LING 197a.) Language Acquisition and	See LING 197a, for description. Usually offered in even years.	Theory and Mathematical Modeling	
Development Psychology 199a. Neuropsychology	Ms. Grimshaw Designed as an introduction to human neuropsychology. Topics include cerebral dominance and localization of function, with special reference to language and related mental function. Usually offered every year.	Psychology 210a. Advanced Psychological Statistics I	Probability and inferential statistics for experimental research. Rules of probability, random variables and their distributions, statistical inference, tests of hypotheses and confidence intervals for population means, principles of experimental design and the analysis of variance. Introduction to compute analysis using the SPSS and BMDP statistical packages.

Usually offered every year.

Mr. Cross

Usually offered every year.

Mr. Wingfield

Psychology 210b. Advanced Psychological Statistics II	Statistical procedures for quasi- and non-experimental research. Correlation and regression, multiple regression, partial and multiple correlation, the analysis of contingency tables (cross-tabulations) and nonparametric statistics. Computer data analysis using SPSS and BMDP. Usually offered every year.	224a and b. Research in Speech Perception and Cognitive Processes 225a and b. Research in Visual Space	Mr. Wingfield
	Mr. Cross	Perception	Mr. Hershenson
Psychology 211b. Seminar in Binocular Vision	Usually offered in odd years. Ms. Halpern	226a and b. Research in Cognitive Processes and	
		Psychopathology	Mr. Knight
Psychology 212b. Visual	Usually offered every other year.	227a and b. Research in Neurolinguistics	
Psychophysics	Ms. Halpern	and	Mr. Zurif
Psychology 213b.	Usually offered every fourth year.	Psycholinguistics 228a and b.	Mr. Zurn
Cognition and the Brain	Staff	Research in Syntax and Comparative Germanic	Ms. Maling
Psychology 214a. Seminar in	Usually offered every two years.	229a and b.	Ms. Mainig
Cognitive Aging	Mr. Wingfield	Research in Person Perception	Ms. Zebrowitz
Psychology 216b. Research Seminar	In this seminar, students present and discuss their ongoing research.	230a and b.	MS, Zebrowitz
in Cognitive Sciences	Usually offered every year.	Research in Animal Behavior	Mr. Wodinsky
	Staff	231a and b. Research in Social Psychology	Ms. Amabile
Psychology 218b. Seminar in Social Cognition	Research in impression formation and causal attribution. Causal attributions for one's own behavior as well as for other people's behavior are treated. Determinants of impression formation and causal attribution to be covered include social information, attention,	232a and b. Research in Developmental Psychopathology 233a and b.	Mr. Cunningham
	motives and individual differences. Usually offered every third year.	Research in Syntax and Language	м с
	Staff	Learnability 234a and b.	Ms. Crimshaw
Psychology 220-240a and b. Courses in	Usually offered every year.	Research in Life-Span Development;	
Research		Adult Personality	Ms. Lachman
220a and b. Research in Spatial Orientation	Mr. Lackner	235a and b. Research in Layout and Motion	M T 11
221a and b.		Perception	Mr. Todd
Research in Semantics and Conceptual Structure	Mr. Jackendoff	236a and b. Research in Developmental Psychology	Mr. Watson
222a and b. Research in Human Spatial		237a and b. Research in Perceptual and Cognitive	
Orientation	Mr. Morant	Development	Mr. Kramer

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238a and b. Research in Metric and Phonological Theory	Mr. Prince	Psychology 315d. Faculty Research Seminar	Required of all first-year graduate students. Taught by all faculty members of the program, the course exposes students to faculty members' current research.
239a and b. Research in Autosegmental and Metrical			Usually offered every year. Staff
Phonology 240a and b. Research in Sensory	Ms. Yip	Psychology 316a. Social/ Developmental Psychology Research Seminar	Required of all social/developmental graduate students who have not been admitted to candidacy. Usually offered every year.
Physiology: Visual and Auditory	M. III	Resear en Gemma	Mr. Watson
Psychophysics	Ms. Halpern	Psychology 318a. (COSI 310d.)	See COSI 310d. for description.
Psychology 250a and b. Advanced Research Project	Usually offered every year. Specific sections for individual faculty members as requested.	Seminar in Artificial Intelligence	Staff
	Staff	Psychology 320a and b. Advanced	Usually offered every year. Mr. Lackner
Psychology 280a and b. Advanced Readings	Offered every year. Specific sections for individual faculty members as requested.	Tutorial in Spatial Orientation	
	Staff	Psychology 400d. Dissertation Research	Specific sections for individual faculty members as requested.
Psychology 300a. Proseminar in Social and	Offers an in-depth review of primary sources in several major topic areas of social and developmental psychology.		Staff
Developmental Psychology	Usually offered in odd years. Ms. Lachman	Courses and Seminars for Graduate Students and Adv Undergraduates	
Psychology 301a and b. Proseminar in Vision and Research Methodology for Vision and Perception	Usually offered every year. Staff	Linguistics 100a. Introduction to Linguistics	A general introduction to linguistic theory and the principles of linguistic analysis. Students construct detailed analyses of data from English and other languages in the areas of syntax, semantics, phonetics and phonology and examine their implications for a theory of language as it is encoded in the human mind. Usually offered every semester. Fall: Mr. Prince
Psychology 304a. Research Methodology for Developmental and Social Psychology	Provides a comprehensive review of empirical methodology in social and developmental psychology including research ethics, hypothesis testing, experimental and quasi-experimental design, naturalistic observation, survey and evaluation research, clinical and applied research, data analysis, report writing and peer review procedures. Usually offered in even years. Staff	Linguistics 110a. Phonological Theory	Spring: Ms. Maling An introduction to generative phonology, the theory of natural language sound systems. Includes discussion of articulatory phonetics, distinctive feature theory, the concept of a "natural class," morphology and the nature of morphophonemics and universal properties of the rules that relate morphophonemic and phonetic representations.
Psychology 310b. Topics in Data Analysis for Social Scientists	Usually offered every third year. Staff		Usually offered every year. Mr. Prince

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Linguistics 120b. Syntactic Theory Linguistics 122b.	Extends the syntactic framework developed in the introductory course through the study of such problems as the complement system and constraints on transformations, with emphasis on their relevance to universal grammar. Usually offered every year. Ms. Grimshaw See ANTH 125b for description.	Linguistics 197a. Language Acquisition and Development	When a child knows a language he/she has successfully constructed a grammar of it; in the course of constructing the grammar the child must form hypotheses about the language and test them against the available data. The central problem of language acquisition is to explain what makes this formidable task possible. We study theories language acquisition, basing our conclusions on recent research in the development of syntax, semantics and phonology. The overagoal is to arrive at a coherent picture of the
(ANTH 125b.) Investigations in an Unfamiliar Language	Usually offered in even years. Staff		language learning process. Usually offered in even years. Ms. Grimshaw
Linguistics 125b. Universal Grammar	Explores the theory of language typology and universal grammar, focusing on the interaction between phonology and morphology. Topics focus on East Asian languages.	Linguistics 199a and b. Directed Research	Usually offered every year. Staff
	Usually offered every third year.	Seminars for Gradu	ate Students
	Staff	Linguistics 215b. Phonology	Recent developments in phonological theory, with special emphasis on prosodic phonolog
Linguistics 130a. Semantics	Explores the semantic structure of language in terms of current linguistic theory. Topics include the nature of semantic representation, functional structure, presupposition and reference.	100000	including autosegmental theories of tone, nonlinear morphology and phonology and metrical theories of stress. Required of first-year graduate students in linguistics and cognitive science.
	Usually offered in odd years.		Usually offered every year.
	Mr. Jackendoff		Ms. Yip
Linguistics 150b. Introduction to Cognitive Science	Considers how the mind is structured to represent and process information of relevance to language and other cognitive domains.	Linguistics 217b. Topics in Phonology	Topics drawn from recent research in metrical, autosegmental and lexical phonology. Requirements include a class presentation and a research paper. Material varies from year to year.
	Usually offered every year.		Usually offered every year.
	Mr. Zurif		Mr. Prince
Linguistics 153a. (PSYC 153a.) Consciousness	See PSYC 153a. for description. Usually offered every third year. Mr. Jackendoff	Linguistics 225b. Syntax	Recent developments in syntax, including such topics as constraints on rules, trace theory, government and binding and lexical-functional grammar. Required of first-year graduate students in linguistics and cognitive science.
Linguistics 173a. (PSYC 173a.) Psycholinguistics	An introduction to modern psycholinguistics with an emphasis on language comprehension and production. Questions concerning species-specificity and the neurological organization of language are included for		Usually offered every year. Ms. Maling
	consideration. Usually offered in even years. Mr. Zurif	Linguistics 226a. Topics in Syntax	Current issues in the theory of syntax, focusing on research in government binding theory and lexical functional grammar. Topics vary from year to year but generally include anaphora, extraction, bounding conditions and lexical representation.
Linguistics 181b. Language and	Usually offered every two years.		Usually offered every year.
Human Nature	Mr. Jackendoff		Ms. Grimshaw

Linguistics 236a. Topics in Semantics	Current issues in the theory of conceptual structure and its relation to syntax.
Semantics	Usually offered every year.
	Mr. Berger
Linguistics 240a. Field Methods	Working with a native speaker language consultant, the students investigate the phonology and syntax of a language unfamiliar to them. The students gain expertise in linguistic analysis through exploring the hypotheses of current theory in a new language context.
	Usually offered in even years.
	Mr. Prince

Russian

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See Joint Program of Literary Studies

Psychology

Sociology

Objectives

The graduate program in sociology is primarily a doctoral program and is designed for students who intend to devote themselves to teaching and research in sociology. The student may, by satisfying certain requirements, receive the M.A. degree. The general objective is to educate students in the major areas of sociology with specialization in several of them.

Admission

The general requirements for admission to the Graduate School, as specified in an earlier section of this catalog, apply to candidates for admission to the sociology program.

In addition, all prospective students are required to submit written material (papers, etc.) representative of their best work, which need not be, however, of a sociological nature.

Faculty

Professor Irving Kenneth Zola Chair: Sociology of health and illness. Disability studies. Deviance. Field methods.

Professor Peter Conrad: Sociology of health and illness. Deviance. Field methods. Professor Shulamit Reinharz: Qualitative research methods. Social gerontology. Feminist research. Social psychology. Group dynamics. History of women's contributions to sociology.

Professor George W. Ross: Political sociology. Social theory.

Professor
Maurice R. Stein:
Communities.
Culture. Counseling.
Consciousness.

Associate Professor Gordon Fellman: Marx and Frend. Social stratification. Peace studies.

Associate Professor Charles S. Fisher: Technology and environment. Social psychology of conscionsness.

Associate Professor Gila J. Hayim: Sociological theory. Critical theory. Post-modern theory and existential sociology. Legal studies. Associate Professor Carmen Sirianni: Work. Organizations. Theory. Time. Comparative sociology. Political sociology.

Assistant Professor M. Jacqueline Alexander: Feminism and post-colonial discourse. Sociology of health. Political sociology, Third World development. Sociology of women. Assistant Professor Karen V. Hansen: Feminist theory. Sociology of the family. Historical sociology.

Assistant Professor Michael W. Macy: Quantitative methods. Political sociology. Class and stratification. Professor Emeritus Egon Bittner: Harry Coplan Professor in the Social Sciences.

Professor Emeritus Morris S. Schwartz: Human relations.

Professor Emeritus Kurt H. Wolff: Social relations.

Degree Requirements

Doctor of Philosophy

Program of Study.

Students entering the Ph.D. program in sociology are expected to undertake a two-year program of course work, as a part of which they are obliged to take the program's proseminar (SOC 290a). The initial program of studies will be arranged in consultation with the graduate student's advisor. Consideration will be given to graduate work done elsewhere but formal transfer credit will be assigned only after the successful completion of the first year of study.

Requirements for the M.A. An M.A. may be granted after the successful completion of two terms of course work and submission of two substantial research papers to be approved by the program.

Residence Requirements.

Requirements.

Language

The minimum residence for the degree of Doctor of Philosophy is two years.

There is no foreign language requirement for the Ph.D. degree.

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Qualifying Examinations.	During a student's residency until the time of his/her formal admission to candidacy, the specific planning, evaluation and accreditation of his/her entire course of study will be in the hands of each student's Guidance-Accreditation Committee, comprised of three faculty members. Along with the student, this committee will lay out a general course of study designed to meet the interests and needs of the student. Upon completion of this course of study, the student will take an oral qualifying examination covering both general sociology and the areas of the student's special interests. The committee will report at least once a year to the Graduate Committee on the progress of the student, who is urged to fulfill accreditation by the end of his/her third year of residence.	Admission to Candidacy. Dissertation and the Final Oral Examination.	A student shall be eligible for admission to candidacy for the Ph.D. upon fulfillment of the residence requirements, passing the program qualifying examination and successful defense of a dissertation proposal. The work on the doctoral dissertation will be supervised by a Dissertation Committee. The Ph.D. dissertation may be accepted by the program upon the recommendation of the Dissertation Committee. To be granted the degree, the student is required to defend the dissertation in a public Final Oral Examination.
Courses of Instr	uction		
Sociology 102a. Social Psychiatry	Training in peer counseling is offered through classes, supervised sessions with other students and community work. Will not be offered Fall 1991. Mr. Stein	Sociology 106a. (Formerly SOC 5a.) Issues in Law and Society	An interdisciplinary approach to the study of crime and punishment. We analyze theories and empirical research around a number of problem-areas in the criminal justice system, with special attention paid to the courts, the prison and the correction systems. May not be repeated for credit by students who have taken SOC 5a in previous years.
Sociology 103a. The Sociology of Mental Illness and Health	This course concerns itself with various sociological and psychological perspectives on the causes, nature and treatment for mental illness.		Usually offered every year. Ms. Hayim
	Usually offered every third year. Mr. Conrad	Sociology 108b. Critiques of Contemporary Society	Discusses methods of social inquiry and criticism and their application to contemporary problematics in technology, communication systems, feminism, the environment and ecology. An evaluation of
Sociology 104a. Sociology of Education	A study of educational institutions that examines pedagogy, educational structures and ideologies as they relate to social inequality in the broader society. Examines the role of the institution of education as a force for social change versus the idea that education's function is to reinforce prevailing		the poststructural debate around these issues is also included and critical theory and their implications for modern man. The emphasis is on the methods and functions of social criticism. Marcuse, Ellul, Foucault, Weedon, Bellah and others are considered.
	social conditions.		Usually offered every year.
	Will not be offered Fall 1991.		Ms. Hayim
Sociology 105a. Feminist Critiques of	Mr. Stein This course critically evaluates the predominant theoretical approaches to understanding the oppression of women and the dynamics of sexism, racism and classism	Sociology 109h. Black Intellectuals and the Crisis of the Twentieth Century	Considers major political writers and leaders in the United States, Africa and the Caribbeau by passing in review the 20th century, as seen from the standpoint of their work. Includes Dubois, Garvey, Nkrumah, King, Rodney and others.
Contemporary Society	within the sex/gender system. Uses these perspectives to explore women's lives that		Usually offered every year.
	often result in their subordination.		Staff
	Usually offered every year.		
	Ms. Hansen		

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Sociology 110b. Sociology of Knowledge	History and historical interpretation of the sociology of knowledge, with particular emphasis on German and recent American literature. Usually offered in odd years. Mr. Wolff	Sociology 117a. Work and Society	Work and its transformation in contemporary society. Topics include blue, white and pink collar work; professional and nonprofessional occupations; gender, family and work; labor market structures; affirmative action and comparable worth and crisis of American unionism.
			Usually offered every year.
Sociology 111a. Political Sociology	Examines the relationship between society and politics, social processes and political change. A critical analysis of the major concepts and alternative theories is presented	Sociology 118a.	Mr. Sirianni See NEJS 161a. for description.
	and their relevance to advanced Western societies (particularly the United States) is discussed.	(NEJS 161a) American Jewish Life	Usually offered every year.
		Life	Staff
	Usually offered every fourth year.		
	Last offered Fall 1990.	Sociology 118b. (NEJS 164b.)	See NEJS 164b. for description.
	Staff	The Sociology of the American	Usually offered every year.
Sociology 112b.	Presents the role of social class in determining	Jewish Community	Staff
Sociology 1125. Social Class, Freedom and Equality	life chances, lifestyles, income, occupation and power; theories of class, inequality and imperialism and selected social psychological aspects of social class and inequality.	Sociology 119a. War and Possibilities of Peace	Reviews consequences of militarism for American society and issues of global interdependence, focusing on political,
	Usually offered every year.	1 cacc	economic, feminist and social psychological matters; national security, nonviolence and
	Mr. Fellman		international relations and environmental issues. Emphasizes the possibility of major "paradigm shift."
Sociology 114b. Society and Economy: Sociological	A review of modern social theories about the production and reproduction of advanced capitalist economies and social orders, focusing on the specification of and		Usually offered every year. Mr. Fellman
Theories of Advanced Capitalism	relationships between major social groups, productive organizations and the market in dynamic perspective.	Sociology 120a. Sociology of	Examines selected aspects of the phenomenon of underdevelopment, paying particular
	Usually offered every year.	Underdevelopment	attention to economic, political and social factors internal to Third World societies.
	Mr. Ross		Although the course is informed throughout by general theorizing about underdevelopment and includes theoretical readings, it emphasizes the local consequences
Sociology 115a. Class Structure and Consciousness	Explores the role of property, authority and knowledge in structuring class inequality and consciousness. Special emphasis is placed on		of large-scale processes. Topics include migration, rural organization, education and urban growth.
	the role of education and the expansion of intellectual labor. Has education supplanted		Usually offered in even years.
	property in status inheritance as well as attainment? Is "meritocracy" incompatible with class inequality or would it further		Staff
	entrench it? Usually offered every year.	Sociology 121b. Mass Media and	Through an examination of the history and development of contemporary media,
	Mr. Macy	Social Reality	including television, films, print media, etc., we explore the impact of mass media on everyday life. Questions of audience, politics
Sociology 116b. Comparative Race and Ethnic	Explores and understands the origin and nature of racial and ethnic differences as they manifest themselves in different human		and ideology, aesthetics and the structure of the culture industry as they perpetuate and create images of "social reality" are also examined.
Relations	societies. We explore how theoreticians explain and account for that difference and define and use it as a basis to change the		Usually offered in even years.
	content of their daily lives.		Mr. Zola
	Usually offered every year.		
	Ms. Alexander		

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Sociology 123b. Crisis of the Welfare State	Cross-national comparisons of the growth and impact of the welfare state are used to illuminate larger theoretical questions about the compatibility, complementarity and tension between capitalism and democracy. Have democratic pressures gone "too far," paralyzing the "invisible hand"? Usually offered every year.	Sociology 132a. City Limits: An Introduction to Urban Sociology	Applies alternative theories of urban politics (elite theory, Marxian structuralism and pluralism) to case studies from New York, Detroit, Dallas, Boston and Atlanta. Usually offered in even years. Mr. Macy
Sociology 125b. Land Tenure and Peasant Struggles in Latin America/ Caribbean	Examines the relationship between the ownership, use and control of land and the ability of "Third World" governments to satisfy the food and agricultural needs of their populations. Emphasis is placed upon the history of land policies, the role of multinationals, the nature of rural class structures, the emergence of peasant movements and the alternative organizations of socialist agriculture.	Sociology 134a. Women and Intellectual Work	This research seminar investigates the history of selected United States and British female social scientists of the late 19th and early 20th centuries. We examine why their work has been ignored or labelled as "not sociology" and how sociology has been defined on the basis of work done by men. We study women of color and white women and heterosexual and lesbian women. Usually offered every year. Ms. Reinharz
	Usually offered every year. Ms. Alexander	Sociology 135a. Group Process	Interpretation of interpersonal behavior and group development, based in part on observation of the group itself. Readings
Sociology 129a. Inequality and Social Identity	Uses a series of ethnographic case studies to introduce a series of related controversies about the ways in which racial, gender and class inequalities shape social identities, interests and conflicts. Students then investigate these arguments using primary materials, gaining knowledge not simply from books and lectures but by actually "doing sociology."	Sociology 141a	include material from psychology and social anthropology as well as sociology. Offered in multiple sections. Usually offered every year. Ms. Reinharz and Mr. Schwartz
	Usually offered every year. Mr. Macy	Sociology 141a. Marx and Freud	Examines Marxian and Freudian analyses of human nature, human potential, social stability, conflict, consciousness, social class and change. Includes attempts to combine the two approaches.
Sociology 130a. The Family	Investigates changes in the character of American families over the last two centuries. A central concern is the dynamic interactions between economic, cultural, political and social forces and how they shape and are	Sociology 144h	Usually offered every year. Mr. Fellman Warrend discuss and critically evaluate the
	reshaped by families over time. Particular attention is paid to how experiences of men and women vary by class, race and ethnicity. Usually offered every year. Ms. Hansen	Sociology 144b. Sociopsychological Dimensions of the Arms Race	We read, discuss and critically evaluate the sociopsychological theories, speculations, interpretations and conceptualizations that explain and try to understand the arms race. Usually offered in odd years. Mr. Schwartz
Sociology 131b. Women's Biography and Society	Through the biographies and autobiographies of women intellectuals, scientists, political leaders, artists and "ordinary" women, this seminar investigates the relationship between women's everyday lives, history and the sex/gender system. Usually offered in odd years.	Sociology 147a. Sociology of Organizations	Introduces students to the study of organizations, primarily through case studies of contemporary organizations in a variety of settings, e.g., street-level bureaucracies, federal bureaucracies, high-risk technology systems, private corporations, schools and democratic collectives.
	Ms. Hansen		Usually offered every year. Mr. Sirianni

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Sociology 148a. Social Psychology of Consciousness I	An exploration into the social psychology of experiences which have been central to religious life. Prayer, contemplation, meditation, devotion, ecstacy and service are examined in traditional and nontraditional settings. Usually offered every year. Mr. Fisher	Sociology 161a. Society, State and Power	Examines the ways in which power is exercised in different political regimes and social systems. The major focus of the course is present-day advanced industrial societies, with particular consideration of the United States. Contrasts are drawn with Soviet-type societies. Usually offered every year. Mr. Ross
Sociology 148b. Social Psychology of Conciousness II	Explores various senses of the self and society as described in both contemporary social psychology and traditional Eastern culture. Focuses on knowing the world in terms of the self's relation to it as exemplified in sociological fieldwork and meditation. Usually offered every year.	Sociology 162a. Phenomenology and Sociology: Alfred Schutz	Course-seminar introduces us to the significance of phenomenology, as presented by Alfred Schutz, for sociology, especially in regard to the grasp of the world of everyday life and other "worlds." Pays particular attention to problems of changing the former in the light of humanity's unprecedented situation today.
Sociology 151b. Fieldwork in Social Settings: Environmental	Provides students with an opportunity to do first-hand research in a setting of their choice. Qualitative research techniques are presented, along with appropriate methods for data		Usually offered every third year. Last offered Spring 1991. Mr. Wolff
Research	analysis. Usually offered in even years. Mr. Conrad	Sociology 164a. Existential Sociology	Introduces existential thought in relation to the discipline of sociology and evaluates selected theories on human nature and interaction, individual freedom and social ethics, the genesis and fate of the modern human group, types of authority, etc.
Sociology 155b. Protest, Politics and Change: Social Movements	Examines "new social movements" such as the civil rights movement, the Greens, the new feminism and others in the light of different social science theories and explanatory techniques.		Usually offered every year. Ms. Hayim
Sociology 157a.	Usually offered in even years. Staff An introduction to Jewish and Palestinian	Sociology 165a. Sociology of Birth and Death I	Explores the ways in which different societies shape the human experience of birth and death. Topics include Eastern attitudes toward birth and death, the Holocaust and nuclear war, the social implications of medica technologies and the home birth and hospice movements.
Sociology of the Israeli-Palestinian Conflict	nationalisms; relevant sociological, political, religious, resource and population issues and the conflict in world politics. Usually offered in odd years.		Usually offered every year. Mr. Stein
	Mr. Fellman	Sociology 165b. Sociology of Birth	A continuation of USOC 165a. Prerequisite USOC 165a.
Sociology 159a. (POL 159a) Politics and Society in	Focuses on the political and social history of postwar France. The format of the course is lecture-discussion, organized around outstanding and most representative films	and Death II	Usually offered every year. Mr. Stein
Contemporary France	which cover the main events of postwar France. Usually offered every year.		

Mr. Ross

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Sociology 170b. (POL 102b) Industrial Sociology	An examination of modern industrial production and its implications for the social order. Stress is placed on the nature of the industrial labor process, the internal organization of industrial institutions (the industrial relations system, unionization, management strategies and practices, bureaucratic and white collar work) and the relationships of industry with the state and the international system. Usually offered in odd years.	Sociology 177b. Aging in Society	Explores the social context of old age by using sociological theory. We examine such topics as aging in residential settings, the aging experience of minority groups, the economics of aging and crime against the elderly. We also examine the definition of old age in other societies in order to understand the contemporary Western response to aging. Usually offered every year. Ms. Reinharz
	Mr. Ross		
Sociology 171a. Black and Third World Women	Examines the position of Black women and women of color within the context of certain political, economic, social and cultural transformations occurring in the Third World and the United States. We aim at an understanding of similarities and differences among these contexts. Usually offered every year.	Sociology 178a. Sociology of the Professions	An introduction to the professions in American society, from law and medicine to the public service, academic and business professions. Topics include the structure of careers and professional organizations, the schooling process, personal and family stress, bureaucratic work, relation to clients and government and alternative forms of professional work. Usually offered in odd years.
	Ms. Alexander		Mr. Bittner
Sociology 173b. Contemporary Social Problems	We deal with a selected group of social problems among which are: a) the social deterioration of the cities, b) the onslaught of information and misinformation, c) the troubles of consumerism, d) the burdens of racism and poverty and e) old age and social isolation. The aim of this course is to enable and encourage students to approach existing and proposed institutional arrangements critically. Usually offered in odd years.	Sociology 181a. Quantitative Methods of Social Inquiry	Introduces students to causal logic and quantitative reasoning and research. Emphasis is on conceptual understanding, no mathematical derivations, with hands-on applications using desktop computers. No statistical or mathematical background is necessary. Usually offered every year. Mr. Macy
	Mr. Bittner	Sociology 188b.	The legal order considered in a framework of
Sociology 174b. Technology and Environment	From an examination of the character of tools, machines and science-based technology, this course looks at the effects of human economic activities on nature. Examples may include forest, water, waste, disaster, wilderness and alternative paths. Usually offered every year.	Sociology of Law	cross-cultural and historical comparison. The role of the instruments of the law and of the administration of justice in contemporary society. Usually offered every year. Staff
		Sociology 190b.	An analysis of the structural arrangements of
Sociology 175b. Food, Environment and Human Life	Mr. Fisher Using concepts from natural history, social science and environmental history, the course examines selective settings in which agricultural systems have affected both human beings and the natural environment.	On the Caring of the Medical Care System	medical practice and medical settings. focusing on the societal and professional response to illness. Usually offered every year. Mr. Conrad
	Usually offered every year.	Sociology 191a.	An exploration into interrelationships between
	Mr. Fisher	Health, Community and Society	society and health and disease, emphasizing both the social causes and experience of illness.
			Usually offered every year.

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Sociology 192a. Sociology of Disability	In the latter half of the 20th century, disability has emerged as an important social-political-economic-medical issue, with a distinct history characterized as a shift from "goodwill to civil rights." We trace that history and the way people with disabilities are seen and unseen and see themselves. Usually offered every year. Mr. Zola	Sociology 202a. Quantitative Research Methods	Designed to involve students in survey and archival data collection and analysis. Technical training is coupled with explorations of methodological issues centering on the integration of theory and empirical research. Through hands-on assignments, students learn to use a variety of modeling techniques and associated computer software. Although the methods are quantitative, the emphasis is not on their mathematical derivation but on conceptual understanding and hands-on (user friendly) application. No statistical background is
Sociology 195b. Group Solidarity	Why are some willing to sacrifice for the "greater good" while others remain indifferent, pursuing mainly private concerns? Does human rationality promote or obstruct group solidarity? Alternative theories are applied to case studies including the		presumed. Usually offered in odd years. Mr. Macy
	Temperance Movement, reproductive rights, the New Right, religious cults and utopian communities. Usually offered every year. Mr. Macy	Sociology 203b. Field Methods	The methodology of sociological field research in the qualitative research tradition. Readings include theoretical statements as well as experiential accounts of researchers in the field. Includes exercises in specific methods and procedures of data collection (participant observation, interviewing, collaborative research, systematic observation, oral history)
Sociology 196b. Seminar: Writing and the Social Sciences	Examines the range of writing in the social sciences, both "popular" and "scholarly," including journal articles, dissertations, books, magazine articles, newspaper columns and life studies. Students write and exchange feedback on short pieces, with visits by social scientists, writers and editors.		and data analysis. Focuses on the student's completion of his/her own research project and functions as a support group to aid in its completion. Usually offered every year. Ms. Reinharz
	Usually offered in odd years.		MS. Reliniaiz
	Mr. Zola	Sociology 204a. Sociology and History	Usually offered every third year.
Sociology 200a. Classical	Critical readings of the sociologies of Marx, Weber and Durkheim.		
Sociological Theory	Usually offered every year.	Sociology 205a. Sexual	Usually offered every third year.
	Staff	Stratification: Historical and Comparative Perspectives	Staff
Sociology 200b.	Examination of American and European	r erspectives	

Contemporary Social Thought

social thought; system and conflict theory, the Chicago School, phenomenological sociology, critical theory and poststructural thought.

Usually offered in odd years.

Ms. Hayim

Sociology 201a. Classical and Critical Theory We study major contributions in the history of sociological thought and attempt to identify critical connections between the classical statements and the modern arguments, from Weber to Habermas and from Levi-Strauss to Foucault.

Usually offered every year.

Ms. Hayim

Sociology 206b. The Family

Studies the evolution of the Western European and American families and the historical processes that have shaped them, especially industrial capitalism, slavery and immigration. Explores various controversies regarding the family: the family as an economic unit vs. a group of individuals with varying experiences; the effects of the shift of activity from primarily production to consumption; increased privatization vs. increased public intervention; recent changes in family structure and fertility patterns and resolution of the double burden associated with the second shift for women.

Usually offered every third year.

Staff

135	Sociology		
Sociology 207a. Feminist Theory	Reviews the primary schools of feminist theory, exploring how well each perspective explains the subordination of women. Examines key contemporary controversies that challenge the various perspectives: how to best integrate the study of race, class and gender; the issue of difference; the compatibility of postmodernism and feminist theory; the universalism debate and postcolonial discourses. Assesses the direction of feminist theory in the 1990s. Usually offered in even years. Staff	Sociology 215b. Participation, Power and Social Change	Participation in political and social theory: pluralist, feminist. communitarian, postmodern, economic (exit/voice), radical and critical theory. Case studies from student women's, environmental and other movements, Community Action, Alinsky and post-Alinsky community organizing (poverty, race and urban development), citizen participation in planning and state agencies, worker participation, town meeting democracy, revolution and postrevolutionary reform. Usually offered in odd years. Mr. Sirianni
Sociology 208a.	Examines classical and contemporary		
Seminar in the Sociology of Organization	organizational theory primarily through case studies of contemporary organizations in a variety of settings: private corporations, unions, street-level bureaucracies, federal agencies, high-risk technology systems, universities, democratic collectives and social change organizations. Critical analysis of issues of power, gender and opportunity; participation is a focus throughout.	Sociology 216b. The Frankfurt School and Critical Theory	Analyzes the foundations of critical theory and evaluates its reformation of the concepts and prospects of social change. Readings include Hegel, Gramsci, Lukacs, Marcuse, Habermas, Offe and Sartre. Usually offered in even years. Ms. Hayim
	Usually offered in odd years.	Sociology 217a.	The aim of this course is to offer a
Sociology 209b. Class and Politics	Mr. Sirianni Usually offered every fourth year. Staff	Problems and Issues in the Sociology of Health and Illness	socio-cultural-historical-political perspective on the study of problems of health and illness We accomplish this by examining some of the basic assumptions underlying the way we conceive of and study issues in health care. The written assignments include a health diary, a text analysis and a book review.
Sociology 210a.	Usually offered every third year.		Usually offered every third year.
The Sociology of Development and Underdevelopment	Staff		Mr. Zola
Sociology 212a. Topics on Women and Development	We examine the relationship between the "development" process and the continued subordination of women in Third World countries. The "development" rhetoric that evolved within major international agencies (U.S.A.I.D., World Bank) is contrasted with the ways in which women have actively structured their lives. Emphasis is placed on women's position in production and reproduction and relationships among the domestic unit, class structure and the larger	Sociology 218a. Advanced Topics in Social Theory and Methods: Surrender and Catch	"Surrender" is the most immediate contact with a topic being studied or a situation or individual being encountered; "catch" is its outcome. We explore the relation between the idea of surrender-and-eatch and the crisis of mankind from which it springs and trace affinities with other recent currents in the social sciences and philosophy. Usually offered in even years. Mr. Wolff
	political economy. Our approach is multidisciplinary and cross-cultural with a focus on Asia, Africa, Latin America/Caribbean.	Sociology 218b. Advanced Topics in Social Theory and Methods	Usually offered every third year. Staff
	Usually offered in odd years.		
Sociology 214a. Topics in Social Psychology: Freud and the Frendian Tradition	Ms. Alexander A study of Freud as a major social theorist. The role of motivation, body, sexuality, dreams, ambivalence, repression, transference, childhood, psychosexual development and psychosocial development in understanding social organization and social dynamics and change.	Sociology 219a. Social Systems and Political Forms	Usually offered every third year. Staff

Staff

Sociology 219b.

in Political

Movements

Advanced Topics

Sociology: Social

This year's topic is social movements. Different contemporary approaches to the study of social movements are reviewed, including collective behavior, rational action, resource mobilization and European "new social movements" theory. Empirical monographs about specific social movements are considered.

Usually offered in odd years.

Mr. Ross

Sociology 220b. Seminar on the Sociology of Politics A survey of the contemporary movements in the sociology of politics of advanced societies. Topics include pluralist and group theories, elite theory, behavioralism and voting studies, the theory of the state debate (neo-Marxist and neo-liberal variants), the "new institutionalism," theories of social movements and rational choice modeling.

Usually offered in even years.

Mr. Ross

Sociology 221a. Advanced Topics in Sociological Theory: French Social Thought Since 1945 French social theory since 1945 is reviewed in the context of French social history and the sociology of intellectuals. Readings include Existentialists-Marxists (Sartre, Merleau-Ponty), Structuralists (Levi-Strauss, Althusser, Poulantzas), Liberals (Aron, Crozier, Boudon and others) and post-1968 figures such as Michel Foucault, Alain Touraine and Pierre Bourdieu.

Usually offered every third year.

Mr. Ross

Sociology 221b. Topics in the Sociology of Religion Usually offered every fourth year.

Staff

Sociology 222b. Society and Health Promotion Examines rise and development of prevention and health promotion in American society. Examines various aspects of the health promotion phenomenon: the emergence of the risk factors paradigm, the wellness movement, government policy (e.g., Surgeon General's Report), research on community and individual intervention and worksite health promotion. The emphasis is on a sociological understanding of health promotion, especially in terms of its emergence, various manifestations and social consequences.

Usually offered in odd years.

Mr. Conrad

Sociology 223a. Sociology of Work

The organization of work in contemporary society, with an emphasis on the United States and other advanced industrial or postindustrial societies (West Europe and Japan). Some limited discussion of work in less developed societies. Topics include forms of control, the deskilling debate, the impact of new technologies, gender and race, labor market segmentation, comparable worth, families and work, service work, the psychodynamics of work in postindustrial society, informal economy, new forms of flexibility, crisis of trade unions and future of work.

Usually offered in even years.

Mr. Sirianni

Sociology 224b. Class and Stratification Confronts the "mainstream" tradition of stratification research with Marxist class theory, placing particular emphasis on the research methodologies implied by and characteristic of these contending analytic frameworks. Students are expected to engage in small, term-long research projects informed by the theoretical and methodological issues that emerge from the readings and discussions.

Usually offered in even years.

Mr. Macy

Sociology 225a. Deviance: Theories and Research Usually offered every fourth year.

Staff

Sociology 226a. Theories in Social Psychology An examination of some major theorists of self and society, social interaction and interpersonal relations. Theorists considered include Cooley, Mead, Sullivan, Goffman, Buber and others.

Usually offered in even years.

Mr. Schwartz

Sociology 228a.
Themes in
Sociological
Theory —
Phenomenology
and Sociology:
Alfred Schutz

An introduction to phenomenology and its significance for sociology by an intensive study of selective writings of Alfred Schutz.

Usually offered every fourth year.

Mr. Wolff

Sociology 228b. Themes in Sociological Theory Usually offered every third year.

Staff

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Sociology 230a and b. Readings in Sociological Literature	Usually offered every year. Specific sections for individual faculty members as requested. Staff	Sociology 401d. Dissertation Research	Independent research for the Ph.D. degree Specific sections for individual faculty members as requested. Staff
Sociology 290a. Proseminar	A seminar meeting once a week in which faculty members introduce their interests and research. Required of all first-year graduate students. Other graduate students are welcome to attend.		
	Usually offered every year.		
	Mr. Zola		

Spanish

See Joint Program of Literary Studies

Theater Arts

Objectives

In a time of shifting fashions in the performing arts, the M.F.A. Professional Theater Training Program at Brandeis focuses on the center of the theatrical experience: the human being While always encouraging experimentation and adventure, we stress the development of a solidly rooted technique, asking actors, playwrights and designers to investigate roles, scenes and spaces — and their own creative impulses — with honesty and intelligence Our goal is a theater that is alive with excitement, clarity and surprise.

Admission

The general requirements for admission to the Graduate School, given in an earlier section of this catalog, apply to candidates for admission to this area of study. Please note, the GRE is not required for theater arts admission. Students apply for admission to one of the three disciplines and, in addition to the standard application procedures, acting applicants are seen in an audition/interview, design applicants attend an interview with portfolio evaluation and dramatic writing applicants submit one or more original play scripts for evaluation.

Acting and design auditions/evaluations are held at Brandeis and other locations around the country. Information about these auditions/evaluations will be furnished by the program after applications have been received; materials from dramatic writing applicants will be reviewed after applications have been received.

Admission is granted for one academic year at a time.

Faculty

Adjunct Professor Michael Murray Director of the Theater Arts Program: Directing.

Professor Martin Halpern: Playwriting and dramatic literature.

Professor Theodore L. Kazanoff: Acting and directing. Adjunct Professor Karl Eigsti: Scenic design.

Adjunct Professor John Bush Jones: Dramatic theory, literature and criticism.

Adjunct Professor Patricia Zipprodt: Costume design. Associate Professor Robert O. Moody: Scene painting.

Associate Professor Maureen Heneghan Tripp: Costume history and decorative arts.

Lecturer Jan Curtis: Singing.

Lecturer
Dennis Parichy:
Lighting design.

Artist-in-Residence Kate Carney: Acting and directing.

Artist-in-Residence Alexander L. Davis: Speech.

Artist-in-Residence Susan Dibble: Movement for the actor.

Artist-in-Residence Daniel Gidron: Acting and directing. Artist-in-Residence Barbara A. Harris: Stage management.

Artist-in-Residence Philip Hendren: Technical director and production manager.

Artist-in-Residence Elena Ivanova: Costume design and rendering. Artist-in-Residence
Denise
Loewenguth:
Costumiere.

Artist-in-Residence Mary Lowry: Voice.

Artist-in-Residence Leslie **Taylor**: Scenic design.

139	Theater Arts		
Degree Requiren Master of Fine Arts Residence Requirements.	Acting: three years. Design and design/technical: three years. Dramatic writing: two years. Dramatic writing with certification: three years.	Design and Design/Technical	All graduate design students will have the opportunity to be involved in production work as design assistants or designers during the course of the three-year program. This program is progressive from year one to year three beginning with basic design and crew work and ending with total production design responsibilities. Production assignments are given each year based on the design students'
Programs of Stu	dy		ability and desire, and consultation with the faculty.
Acting	The acting faculty provides close supervision of class and performance work for first-year actors; second- and third-year actors are the core of the acting company for mainstage and other production activities. First-year actors are not cast in major productions until the second term. Second- and third-year actors are required to audition for and play as cast in all major productions, unless excused by the chair after consultation with the director.	Dramatic Writing	Dramatic writing students are required to serve on 1.5 crews each year (about 90 hours). They are also required to participate in the preparation of any studio, workshop or major production of their plays mounted during the time they are in residence, and this counts as one crew. In rare instances, acting in a major production may count as one crew
	Actors are required to serve on a crew for one major production each year (about 60 hours); normally this crew may not be for a play in which the student is also performing. Students are expected to help on crew whenever they have time, regardless of formal credit.		
Courses of Instru	action		
Required Course	s for First-Year Actors	Theater Arts 203d. Acting I Laboratory	Small group work with instructor. Usually offered every year.
Theater Arts 200d. (Formerly THA 201d.) Seminar in	Approaches to the analysis and interpretation of dramatic texts and the translation of texts into theatrical production, including discovery of "the world of play" through research and	Theater Arts 205d.	Mr. Kazanoff Through physical awareness and alignment
Dramatic Literature, Theory and Production Methods	other investigation. Usually offered every year. Messrs. Jones and Murray	(Formerly THA 207d.) Movement I	work, dance for the actor (including ballroom and folk dance styles), Alexander Technique, stage combat, movement improvisation and creative projects, this course offers the actor a process in which to experience more flexibility and freedom of expression through movement
Theater Arts 201d. (Formerly THA 203d.)	Acting exercises and rudimentary scene work are used to awaken the actor's own impulse and eliminate conventional cliche responses.		Usually offered every year. Ms. Dibble
Acting 1	Scene work continues with the addition of circumstances, relationships and the logic and continuity of a play.	Theater Arts 207d.	Individual and small group work with instructors.
	Usually offered every year.	Tutorial	Usually offered every year.
	Mr. Kazanoff		Ms. Dibble
Theater Arts 202d. (Formerly THA 203d.) Acting I Improvisation	Focuses on uncovering the actor/storyteller's sense of play and a physical expression of inner life. Moving from ensemble and transformational work to psychophysical improvisations, the actor reconnects with a spontaneous flow of impulse and converts first into action, then into event in performance projects using masks, clowning and text as springboards.	Theater Arts 210d. (Formerly THA 209d.) Voice 1	Concentrates on voice production for performance and includes practical knowledge of how the voice works, identification of individual vocal habits and tensions, understanding dynamic relaxation and alignment. Particular attention is given to breathing, rooting sound, forward focus of tone and development of resonance.
			Usually offered every year.

Ms. Carney

Ms. Lowry

140	Theater Arts		
Theater Arts 211d. (Formerly THA 209d.)	Individual and small group work with instructor.	Required Courses for Second-Year Actors	
Voice I	Usually offered every year.		
Tutorial	Ms. Lowry	Theater Arts 251d. (Formerly THA 204d.) Acting II	Continuing work in exploration of process that integrates self and text through study of Laban, Chekov and techniques that help actor objectify emotion. Scoring now includes
Theater Arts 212d. (Formerly THA 205d.) Speech I	Consists of defining the speech act, describing the organ of speech and isolating the sounds of speech through the International Phonetic Alphabet in order to reduce problems of	Ü	through-line and overall objective. Scenes from all of dramatic literature. Usually offered every year.
	articulation and train the ear to hear the subtle variations in sound, rhythm and melody of speech. Frequent readings used as practice.		Mr. Kazanoff
		Theater Arts 252d. (Formerly THA	Acting in the second year contains significant work on Shakespeare, with emphasis on the
	Usually offered every year. Mr. Davis	204d.) Acting II — Shakespeare	physicalization of a role and the search for form.
TI			Usually offered every year.
Theater Arts 213d. (Formerly THA 205d.)	Individual and small group work with instructor.		Mr. Gidron and Staff
Speech I Tutorial	Usually offered every year.	Theater Arts 255d.	Includes warm-up with strength, stretch and
	Mr. Davis	(Formerly THA 208d) Movement II	alignment exercises. Contact improvisation, dance and mimetic techniques are explored. Personal creativity and use of advanced skills
Theater Arts 214d. (Formerly THA 233d.) Singing I	Fundamentals in vocal technique and music theory. A survey of music theater repertoire and some classical repertoire. Small groups		are stressed in movement projects continued into the second year.
	and/or tutorials.		Usually offered every year.
	Usually offered every year.		Ms. Dibble
	Ms. Curtis		
Theater Arts 215b.	First-year actors are not cast in major	Theater Arts 256d. (Formerly THA 208d.) Movement Style II	Period Dance and Styles are taught focusing on the Middle Ages and Renaissance. Tap, combat, Alexander Technique and free-form jazz dance are included in the second year.
(Formerly THA 304d.) Rehearsal and	productions until the second term when they perform in the first-year production. Following that production, they are required	movement style ii	Usually offered every year.
Performance I	to audition for, and play as cast in, all major productions.		Staff
	Usually offered every year. Staff	Theater Arts 257d. (Formerly THA	Individual and small group work with instructors.
		208d.) Movement II	Usually offered every year.
Theater Arts 249d. (Formerly THA 225d.)	Specifically designed to provide guided practical experience to the student in a variety of theatrical crafts.	Tutorial	Ms. Dibble
Production Laboratory I	Usually offered every year.	Theater Arts 260d.	Continuation and consolidation of vocal skills
	Mr. Hendren and Staff	(Formerly THA 210d.) Voice II	learned in the first year. Vocal workouts are expanded to increase flexibility, range and power. Special emphasis on releasing heightened emotion, skills for handling artifice in language and the application of acquired knowledge to a variety of performance situations and environments.
			Usually offered every year.
			Ms. Lowry
		Theater Arts 261d. (Formerly THA	Individual and small group work with instructor.
		210d.) Voice II	Usually offered every year.
		Tutorial	Ms. Lowry
			Ma. DUWIY

Ms. Lowry

141	Theater Arts		
Theater Arts 262d. (Formerly THA 206d.)	A continuation of Speech I, focusing on rhythm and melody, leading into poetry and specifically dealing with Shakespeare. Dialect	Required Courses for Third-Year Actors	
Speech II	work also begins during this year. Usually offered every year. Mr. Davis	Theater Arts 301d. Acting III	Third-year acting is comprised of four seven-week intensive training units that concentrate on specific styles and playwrights taught by members of the acting faculty and guest artists. Offerings in the past have included study of 17th-century language, film
Theater Arts 263d. (Formerly THA 206d.)	Individual and small group work with instructor.		and television and Sam Shepard. Offerings are tailored to meet the needs of each third-year class.
Speech II Tutorial	Usually offered every year.		Usually offered every year.
	Mr. Davis		Staff
Theater Arts 264d. (Formerly THA 234d) Singing II	Intermediate vocal technique including a deeper focus on legato and leggiero work. Intermediate theory including intervals and ear training. A continuing survey of musical literature.	Theater Arts 305d. (Formerly THA 302d.) Movement III	Focuses on the Restoration Period, Comedia style and offers continued work in basic alignment and Alexander Technique. Curriculum also corresponds with seminars in Acting III.
	Usually offered every year.		Usually offered every year.
	Ms. Curtis		Ms. Dibble
Theater Arts 265d. (Formerly THA 304d.) Rehearsal and Performance II	Second-year actors are required to audition for, and play as cast in, all graduate productions. Usually offered every year.	Theater Arts 306d. (Formerly THA 302d.) Movement Style III	A continuation of Movement Style II, advanced instruction is offered in specialized movement areas, including tap and stage combat. Actors should be eligible for
Performance II	Staff		certification by the Society of American Fight Directors as actor-combatants by their third year.
Theater Arts 299d.	See THA 249d. for description.		Usually offered every year.
(Formerly THA 226d.) Production	Usually offered every year.		Staff
Laboratory II	Mr. Hendren	Theater Arts 307d. (Formerly THA 302d.)	Individual and small group work with instructor.
		Movement III Tutorial	Usually offered every year.
		i utoriai	Ms. Dibble
		Theater Arts 310d. (Formerly THA 303d.) Voice III	Structured to complement the styles studied in third-year acting, special emphasis is also placed on individual needs, including exploration of "character" voices. Group vocal improvisations are introduced into class work.
			Usually offered every year.
			Ms. Lowry
		Theater Arts 311d. (Formerly THA 303d.)	Individual and small group work with instructor.
		Voice III Tutorial	Usually offered every year.
			Ms. Lowry

2	Theater Arts		
Theater Arts 312d, (Formerly THA 305d.)	Continuation of dialect work and readings in classical drama as well as special projects and individual work.	Required Course	s for First-Year Designers
peech III	Usually offered every year.	Theater Arts 200d. (Formerly THA	See description under Courses Required for First-Year Actors.
	Mr. Davis	201d.) Seminar in	Usually offered every year.
		Dramatic Literature, Theory	Messrs. Jones and Murray
Theater Arts 313d. (Formerly THA 305d.) Speech III Tutorial	Individual and small group work with instructor.	and Production	Messis, Jones and Murray
	Usually offered every year.		
	Mr. Davis	Theater Arts 220d. (Formerly THA 237d.)	Certain first-year students are assigned as assistants to second- and third-year designers in areas of production such as scenic arts,
Theater Arts 314d. (Formerly THA	Advanced vocal technique is emphasized, with further study of theoretical principles	Design Practicum I	props, hair and make-up, millinery, costume and lighting.
34d.) inging III	and concentration on sightreading. Survey of repertoire for learning and audition purposes.		Usually offered every year.
	Usually offered every year.		Staff
	Ms. Curtis	Theater Arts 221d. Designing for	Provides all design students with a fundamental approach to designing in the
heater Arts 315d. Formerly THA	Third-year actors are required to audition for, and play as cast in, all graduate productions.	Theater Seminar	theater. Emphasis is placed on developing visual equivalents for plays of all periods as
304d.) Rehearsal and Performance III	Usually offered every year.		they exist in nonvisual/verbal texts. In addition, the students develop their ability to see theater with a visual eye and transform
	Acting Faculty		abstract theatrical ideas into visual realities.
			Usually offered every year.
heater Arts 347a b. Formerly THA	Third-year actors are required to participate in one term of the Playwriting Workshop. Each week actors are assigned roles in new		Mr. Eigsti and Ms. Zipprodt
315e.) Playwriting Workshop III	plays by Brandeis M.F.A. playwrights. Scripts are read in class and actors participate in the discussions following the reading.	Theater Arts 222d. Designing for Theater	An ongoing evaluation of portfolio materials created through the Designing for Theater Seminar.
	Usually offered every year.	Laboratory	Usually offered every year.
	Mr. Halpern		Mr. Eigsti and Ms. Zipprodt
		Theater Arts 225d. (Formerly THA 211d.) Set Design I	Students work with problems of scale, model-making and drafting. They explore using these techniques in designing sets. There is extensive supervised work in class on these projects.
			Usually offered every year.
			Ms. Taylor
		Theater Arts 226d. (Formerly THA 222d.) Drafting I	Specifically dedicated to developing drafting as a valid design language and tool for theatrical designers. Emphasis is placed upon development of techniques and skills to provide for clear communication of design ideas in the finished production drawings.
			Laboratory fee to be arranged.
			Usually offered every year.
			Mr. Hendren
		(Formerly THA 222d.)	as a valid design language and tool theatrical designers. Emphasis is pl development of techniques and skil provide for clear communication of ideas in the finished production dra Laboratory fee to be arranged. Usually offered every year.

143	Theater Arts			
Theater Arts 230d. (Formerly THA 217d.) Costume Design I	Explores various methods of drawing and painting as tools for expressing the costume design. Projects incorporate these design and technique problems. There is extensive supervised work in class on these projects. Usually offered every year. Ms. Ivanova/Ms. Zipprodt	Courses for Second-Year Designers In the second year, design students begin to specialize in a specific area of design. Under the advice of the design faculty, their choice o courses must be taken from the following list and program electives. All second-year design students are required to take THA 270d, Design Practicum II and THA 299d, Production Laboratory II.		
Theater Arts 231d. (Formerly THA 214d.) Costume Pattern Drafting	Basic pattern drafting of bodices, sleeves, skirts and pants; followed by muslin construction, fitting and adaptation of the basic pattern to various styles of fashion. Laboratory fee to be arranged. Usually offered every year. Ms. Loewenguth	Theater Arts 270d. (Formerly THA 238d.) Design Practicum II	Design students serve as assistants to the designers in the areas of scenery, costumes and lighting. In addition, selected students design in the Laurie Theater. These design projects are supported by the design faculty it each area (scenery, costume, lighting and scene painting). Usually offered every year. Staff	
Theater Arts 232d. (Formerly THA 230d. and THA 221d.) Drawing I	An introductory course in drawing skills, including life drawing and basic and perspective drawing. Life drawing includes figure-drawing instruction and studio practice with a focus on developing observational and drawing skills. Using various exercises involving movement, form and shape, the student will learn the basics of perspective and drawing figures to scale.	Theater Arts 275d. (Formerly THA 212d.) Set Design II	Second-year set design students focus on advancing the technical and visual skills begun in the first year. Each student delves further into using the text, music and theatrical space to shape their designs. An emphasis is placed on developing an individual process to the work. Usually offered every year. Ms. Taylor	
	Laboratory fee to be arranged. Usually offered every year. Mr. Moody	Theater Arts 276d. (Formerly THA 227d.) Set Rendering I	Set rendering includes instruction in various drawing and painting techniques employed i the process of designing. The rendering projects are tailored to the student's theoretical set-design projects.	
Theater Arts 235d. (Formerly THA 219d.) Lighting Design I	The first-year graduate lighting design student studies an approach to developing a light plot with an emphasis on lighting mechanics and drafting conventions. The student also develops visual awareness through the study of artistic composition as well as learn a conceptual approach to lighting design. Laboratory fee to be arranged.	Theater Arts 277d. (Formerly THA 22+d.) Stage Mechanics	Usually offered every year. Mr. Moody Explores both the theater structure as a machine to house theatrical production and traditional as well as current techniques for the movement and rigging of scenery within	
Thomas Arts 210J	Usually offered every year. Mr. Parichy		that mechanical environment. Specific projects are assigned to develop scenery shifting strategies that allow for a variety of technological solutions to scenic movement problems.	
Theater Arts 249d. (Formerly THA 225d.) Production Laboratory I	See description under Courses Required for First-Year Actors. Usually offered every year. Mr. Hendren		Laboratory fee to be arranged. Usually offered every year. Mr. Hendren	
		Theater Arts 278d. (Formerly THA 223d.) Scene Painting	Scene painting includes instruction in basic scene-painting skills, methods, materials and techniques commonly applied in scenic studios and scenery for theater, film and television.	

Mr. Moody

144	Theater Arts		
Theater Arts 280d. (Formerly THA 218d.) Costume Design II	Second-year costume design students focus on technical and design skills begun in the first year. In-depth investigation of text and music to reveal character occurs. Students develop an individual approach to the work. Usually offered every year. Ms. Zipprodt	Theater Arts 291d. Scenie Technology II	Fully explores scenery construction and assembly procedures based on using wood technology and materials. A study is made of recent wood product innovations in the construction industry as applied to theatrical scenery fabrication. Usually offered every year. Mr. Hendren
Theater Arts 281d. (Formerly THA 227d.) Costume Rendering 1	Second-year costume design students continue to develop their drawing and rendering skills, working from life studies and using their first-year projects as vehicles for exploration of techniques. Usually offered every year. Ms. Ivanova	Theater Arts 292d. Production Planning and Resource Management	Incorporates the processes involved in developing detailed season and individual production schedules. Comprehensive calendar projects are assigned. Cost estimation, both materials and labor, is explored, as well as production budget preparation. In addition, human relations principles and practices, OSHA regulations and state safety and personnel law are
Theater Arts 282d. (Formerly THA 232d.) Costume Construction 1	Conversion of basic pattern to historically accurate period costume with emphasis on construction. Laboratory fee to be arranged.		covered. Usually offered every year. Mr. Hendren
	Usually offered every year. Ms. Loewenguth	Theater Arts 293d. Costume Technology I	Entails a practical study of the building of costumes, exploring the properties and versatility of costume materials and fabrics, as well as the methods and machinery needed to create the costumes.
Theater Arts 283d. (Formerly THA 235d.) Costume History and Decorative Arts	Studies the changing life styles of polite and impolite society, their models, manners and environments. Focus is on the European world 1500-1900. Seminars and slide lectures lead to each student's own presentation to the		Usually offered every year. Ms. Loewenguth
Arts	class and primary source research notebook. Usually offered every year. Ms. Tripp	Theater Arts 294d. Costume Crafts Seminar and Workshop I	A practical study of the theories and methods involved in intricate costume crafts, creating accessories such as jewelry, masks and hats, as well as the dyeing and painting of fabrics. Taught by members of the Costume Staff, occasional guest artists who are experts in
Theater Arts 285d. (Formerly THA	The second-year lighting design student continues developing a conceptual approach		their crafts are featured.

Theater A (Formerly THA 220d.) Lighting Design II

continues developing a conceptual approach to design and also solves advanced problems in lighting design, i.e., musicals, opera and multi-set productions. Those students with a lighting emphasis design the lighting for a departmental production.

Usually offered every year.

Mr. Parichy

Laboratory fee to be arranged.

Theater Arts 290d. Drafting II

Specifically dedicated to the techniques of developing shop drawings from designer-produced plans and orthographic elevations. Emphasis is placed on detail drawings in larger scales.

Usually offered every year.

Mr. Hendren

Usually offered every year.

Ms. Loewenguth and Staff

Theater Arts 299d. (Formerly THA 226d.) Production

Laboratory II

Laboratory I.

See description for THA 249d., Production

Usually offered every year.

Mr. Hendren

113	Theater Arts		
As in the second year specific area of design of courses must be ta electives. All third-ye	rd-Year Designers , third-year design students specialize in a 1. Under advice of the design faculty, their choice ken from the following list and department ar designers are required to take THA 320d, and THA 349d, Production Laboratory III.	Theater Arts 331d. (Formerly THA 244d.) Costume Rendering II	A continuation of THA 281d., Costume Rendering I, this course involves advanced study on an individual basis. Usually offered every year. Ms. Loewenguth
Theater Arts 320d. (Formerly THA 239d.) Design Practicum III	Design students are assigned shows to design in their specialized field of interest: scenery, costumes and lighting. In addition, assignments in scene painting, mask making, props and specialized costume accessories are also given to design students who have achieved an advanced craft skills level in the course of the three-year program.	Theater Arts 332d. (Formerly THA 245d.) Draping and Costume Construction II	Draping of various period costume, advanced study of costume construction. Laboratory fee to be arranged. Usually offered every year. Ms. Loewenguth
	Usually offered every year. Staff	Theater Arts 335d. (Formerly THA 246d.) Lighting Design III	The third-year lighting design student will continue in individual and advanced problems as well as design the lighting for a departmental production. The third-year
Theater Arts 325d. (Formerly THA 242d.) Set Design III	An advanced design seminar, tutorial in nature, centered on the third-year student's portfolio. Each student works to develop a portfolio of projects and realized productions, which serve as a basic tool in seeking employment in the professional theater after graduate training is completed.		student is also encouraged to seek an internship outside of the program. Usually offered every year. Mr. Parichy
	Usually offered every year. Mr. Eigsti	Theater Arts 340d. Drafting III	A continuation of THA 290d, Drafting II, in terms of detail-oriented shop drawing techniques and skills, with the emphasis on construction technology and materials applications integrated into the drawing. CAD
Theater Arts 326d. Set Rendering II	A continuation of THA 276d, Set Rendering I, this course involves advanced study on an individual basis.		equipment and techniques are introduced and explored as applicable to theatrical use. Usually offered every year.
	Usually offered every year. Mr. Moody		Mr. Hendren
Theater Arts 328d. (Formerly THA 228d.) Scenic Crafts	Scenic crafts provides advanced scene painting skills, methods, materials and techniques commonly applied in scenic studios and scenery for theater, film and television.	Theater Arts 3+1d. Theater Architecture and Engineering	Explores the physical aspects of the theatrical structure, both auditorium and production spaces. Building and fire code considerations, as they affect theatrical architecture, are explored. Guest lecturers and field trips to Boston-area theater spaces are arranged.
	Laboratory fee to be arranged.		Usually offered every year.
	Usually offered every year. Mr. Moody	Theater Arts 342d.	Mr. Hendren Provides, under faculty guidance, student control and supervision (within given areas of
Theater Arts 330d. (Formerly THA 243d.)	An advanced design seminar, largely tutorial in nature, centered on the students' portfolios and realized production designs, which serves	Supervision Practicum	expertise) of specific aspects of the actual production process of scheduled departmental productions as assigned.

Usually offered every year.

Mr. Hendren

243d.) Costume Design

and realized production designs, which serves as the basic tool in seeking employment after graduation.

Usually offered every year.

Ms. Zipprodt

146	Theater Arts			
Theater Arts 343d. Costume Technology II	A continuation of THA 293d, Costume Technology I, this course explores in greater depth and with a more thorough application,	Required Courses for First-Year Playwrights		
Theater Arts 344d.	the skills and knowledge acquired in the previous year's class. Usually offered every year. Ms. Loewenguth A continuation of THA 294d, Costume Crafts	Theater Arts 200d. (Formerly THA 201d.) Seminar in Dramatic Literature, Theory and Production Methods	See description under Required Courses for First-Year Actors. Usually offered every year. Messrs. Jones and Murray	
Costume Crafts Seminar and	Seminar and Workshop I, this course involves more advanced study.			
Workshop II	Usually offered every year. Ms. Loewenguth	Theater Arts 246e. (Formerly THA 200e.) Seminar in Scene	For first-year graduate playwriting students; weekly assigned exercises in scene writing are read and critiqued in class with the aim of sharpening the students' skills in handling	
Theater Arts 349d. (Formerly THA 325d.)	See description for THA 249d., Production Laboratory 1.	Writing and Analysis	character motivation, conflict, progression and scenic structure. Open to second- and third-year students as a noncredit course.	
Production	Usually offered every year.		Usually offered every year.	
Laboratory III	Mr. Hendren		Mr. Halpern	
		Theater Arts 247e. (Formerly THA 215e.) Playwriting Workshop I	The central course in the curriculum for all graduate playwriting students. Prepared reading and detailed critiques of student scripts, at various stages of development, with the aim of shaping complete, producible plays. Individual conferences with the playwriting professor follow each workshop session. Further development of the most viable scripts is provided through staged public readings, studio production and department productions. A double-credit course.	
			Usually offered every year.	
			Mr. Halpern	
		Theater Arts 249d. (Formerly THA 225d.)	See description under section Required Courses for First-Year Actors.	
		Production Laboratory I	Usually offered every year.	
		Laboratory 1	Mr. Hendren	

In addition, one full-year elective course in theater arts or approved courses in other departments.

Required Courses for Second-Year Playwrights

Theater Arts 296d. (Formerly THA 202d.) Seminar in Dramatic

Structure

Development of techniques for discovering and analyzing varying types of dramatic structures in plays from the Greeks to the present and employing structure as a tool to understanding or deriving meaning from theatrical texts.

Usually offered every year.

Mr. Jones

Theater Arts 297e. (Formerly THA 216e.) Playwriting Workshop II See description for THA 247e, Playwriting Workshop I. A double-credit course.

Usually offered every year.

Mr. Halpern

Theater Arts 299d. (Formerly THA 226d.) **Production**

Laboratory II

See description for THA 249d, Production Laboratory I.

Usually offered every year.

Mr. Hendren

In addition, one full-year elective course in theater arts or approved courses in other departments.

Required Courses for Third-Year Playwrights

Theater Arts 347e. (Formerly THA 315e.) Playwriting

Workshop III

See description for THA 247e, Playwriting Workshop I. A double-credit course.

Usually offered every year.

Mr. Halpern

Theater Arts 349d. (Formerly THA 325d.) Production Laboratory III See description for THA 249d, Production Laboratory l.

Usually offered every year.

Mr. Hendren

In addition, one full-year elective course in the ater arts or approved courses in other departments. Students may take the following theater arts courses as electives as well as approved courses in other departments.

Theater Arts 350d. (Formerly THA 213d.) Directing

Essentially a laboratory course emphasizing the director's responsibility to tell a story in strong theatrical terms. Student directors present scenes each week, which are analyzed and reworked by the class with the goal of developing an imaginative and personal approach to a play. Open to second- and third-year actors, designers and playwrights.

Usually offered every year.

Mr. Murray

Theater Arts 352d. (Formerly THA 240d.) Acting for Designers and Playwrights An acting course for second- and third-year designers and playwrights.

Usually offered in odd years.

Mr. Kazanoff

Theater Arts 355b.

(Formerly THA 250d.) Career Workshop Open only to third-year actors, this course is designed to help them prepare for the business demands of an acting career.

Usually offered every year.

Acting Faculty and Staff

Theater Arts 360c. (Formerly THA 101c.) Stage Management An introduction to the field, including: general organization and coordination, prerehearsal planning, the rehearsal process, technical considerations, the running of a show and specific problems from differing production types and styles and varying levels of theatrical organization. Students must serve as stage manager or assistant stage manager for one departmental production.

Usually offered in odd years.

Ms. Harris

Theater Arts 380d. (Formerly THA 310d.) Thesis Projects — Design The graduate design thesis is a full-scale project that grows out of the periodic portfolio reviews. It may be either a realized or nonrealized project.

Usually offcred every year.

Design Faculty

Theater 390d. (Formerly THA 300d.) Independent Study

Usually offered every year.

Staff



University Organization

Board of Trustees

Under Massachusetts law, the 50-member Board of Trustees is the governing body of the University. There are also four faculty representatives and three student representatives to the Board who participate in Board meetings and have votes on the several committees. The chair of the Fellows, the president of the National Women's Committee and the president of the Alumni Association serve ex-officio. Alumni elect annually an Alumni Term Trustee who serves as full voting trustee for a five-year term.

The President

The President, the chief executive officer of the University, is appointed by the Board of Trustees and is responsible for all university activities.

Chancellor Emeritus

Chancellor Emeritus of the University is an honorary title held by Brandeis' Founding President Abram L. Sachar.

University Fellows

University Fellows comprise about 400 national leaders from a broad base of business, educational and public life who lend counsel, expertise and support to University development and planning programs.

The President's Council

President's Councilors are leading men and women throughout the country whose skills and experience are placed at the disposal of the Brandeis president in areas of their special competence.

The Provost and Deans

The Provost and Dean of the Faculty, the chief academic officer of the University, supervises academic policy, undergraduate and graduate curricula, library services, the faculty and its departments of instruction.

The Associate Provost has responsibility for certain administrative and academic areas of the University including the School of Science; the Center for Complex Systems; Computing Services; Grant, Contract and Patent Administration; the Library; Development; and Strategic Planning.

The Associate Dean for Humanities, Arts and Social Sciences coordinates for the Provost's office all administrative, programmatic, development and planning functions for the component departments. The Dean of the College of Arts and Sciences assumes responsibility for many areas affecting the academic lives of undergraduates, including curriculum development, advisory services and the academic progress of students.

The Dean of the Graduate School of Arts and Sciences oversees the individualized programs of graduate study for scholars, scientists and artists in 20 disciplines.

The Dean of the Florence Heller Graduate School for Advanced Studies in Social Welfare oversees the academic activities of the University's first and only professional school and its work in such areas as health, aging, income and employment and minorities.

The Dean of Student Affairs is responsible for many areas of student life, including student activities, residence life, career planning and placement, health service and athletics.

The General Counsel is the chief legal advisor to the President, the Board of Trustees and the University's senior management officials, including those responsible for administrative affairs, business and finance, development, public affairs and student affairs.

The Faculty Senate

The Faculty Senate, the elected representative body of the faculty, discusses such issues as academic freedom and responsibility, university policy, appointments, tenure, dismissal and salaries.

The Vice Presidents

The Executive Vice President for Finance and Administration oversees Brandeis' complete financial and administrative support operations. The major responsibilities include budgeting and planning, capital programs, endowment and investment management, administrative data processing, telecommunications, plant operations, employee relations, security, materials management and community relations. The Executive Vice President also scrves as principal liaison with the Budget and Finance, Investment and Facilities committees of the Board of Trustees.

The Vice President for Development and Alumni Relations is responsible for directing the institutional relations of the University related to fund-raising and alumni, including the National Alumni Association, regional alumni chapters and the Alumni Fund. The Vice President for Administration is responsible for campus facilities, grounds and administrative operations.

The Vice President for Public Affairs is responsible for the University's communications, including such publications as the Brandeis Review, the Brandeis Reporter, newsletters and brochures and external relations, including media relations. He also serves as the University's principal state and federal relations officer and provides liaison with certain national organizations.

The Vice President and University Treasurer is responsible for the financial administration and business operations of the University and for endowment management, the controllership function and related financial programs.

National Women's Committee

The National Women's Committee, "the largest friends of a library association" in the country with approximately 60,000 members, has been a partner with the University since 1948. The executive director and national office personnel are responsible for working with the organization's volunteer leadership to develop projects, implement programs and service more than 110 National Women's Committee chapters throughout the United States. This volunteer organization offers its membership a wide range of educational activities. These include unique study group programs with syllabi provided by Brandeis faculty; "University on Wheels" local adult education seminars; and special lectures by University speakers Members serve as ambassadors of goodwill for the University in their local communities. The primary mission of the Women's Committee is to support the Brandeis University Libraries. The organization supports all aspects of the Libraries' operation, including the acquisition of books and research journals, restoration and preservation, computerized reference system, Library Work Scholars and rare acquisitions. Since the organization's founding 43 years ago by eight women in Boston, the National Women's Committee has contributed approximately \$38 million in support of the Brandeis Libraries.

The Graduate Council

The members of the Graduate Council of the Graduate School of Arts and Sciences are appointed annually by the President of the University. Members of the Graduate Council for 1991-92 are:

The President of the University and the Dean of the Faculty of Arts and Sciences (ex-officio)

The Dean of the Graduate School (Council Chair)

Mark Adler Chair, Department of Mathematics

Stuart H. Altman Dean, Florence Heller Graduate School for Advanced Studies in Social Welfare

Eugene C. Black Chair, Comparative History Program

Seyom Brown Chair, Department of Politics

Jacques Cohen Chair, Department of Computer Science

David Hackett Fischer Chair, History of American Civilization

Eugene Goodheart Chair, Department of English and American Literature

Robert C. Hunt Chair, Department of Anthropology

Peter C. Jordan Chair, Department of Chemistry

Attila Klein Chair, Department of Biology Robert T. Marshall Chair, Department of Music

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Summer, Special and Continuing Studies Assistant Provost Sydeman 4 617-736-2111





Application Requirements

Graduate School of Arts and Sciences P.O. Box 9110 Waltham, Massachusetts 02254-9110

The following should be sent to the Dean. Graduate School of Arts and Sciences, Brandeis University, Waltham, Massachusetts, 02254-9110. See program deadlines below.

- Completed application form in duplicate. \$50 application fee. Application fee waivers will not be granted unless the applicant is from a country where foreign exchange controls prevent overseas payments, or the applicant's need for a waiver can be verified by a letter from a college financial aid officer.
- 2 Official undergraduate and graduate transcripts in duplicate from the appropriate college or university registrar. Applications will not be considered unless documents are submitted in duplicate.
- 3 Two letters of recommendation, submitted with the provided forms in duplicate and sent directly from professors under whom the applicant has studied in area of proposed specialization. The graduate programs in biochemistry, biology, biophysics and computer science require a third letter of recommendation.
- 4 Applicants to the graduate programs in anthropology. biochemistry, biology, biophysics, chemistry, English, politics and psychology must submit results of the Graduate Record Examination, All others are urged to do so. Applicants to the Lemberg Program in International Economics and Finance must submit results of either the Graduate Record Examination or the Graduate Management Admission Test. Applicants to the Hornstein Program in Jewish Communal Service must submit results of either the Graduate Record Examination or the Miller Analogies Test.
- 5 Samples of written work are required by the graduate programs in comparative history. English and American literature, history of American civilization, Jewish communal service, joint program of literary studies, sociology and theater arts; these are not required to be submitted in duplicate. Please consult program requirements in the Graduate School Bulletin for specifics.
- 6 Statement of purpose. Please submit an essay in duplicate stating your reasons for wishing to undertake graduate work.

Deadlines

Following are the closing dates in 1992 for the receipt of completed applications for the 1992-93 academic year.

Anthropology	February 15
Biochemistry	March 15
Biology	March 15
Biophysics	March 15
Chemistry	February 28
Comparative History	March 1
Comparative History M.A.	August 15
Computer Science	March 15
English and American Literature	February 15
History of American Civilization	March 1
International Economics and Finance	February 15

Jewish Communal Service March 1 Joint Program of Literary March 1 Studies Mathematics February 15 Music March 1 Near Eastern and Judaic February 1 Studies **Physics** March 1 Politics February 15 Psychology and Cognitive February 15 Science Psychology M.A. June 1

February 15

February 15

Sociology

Theater Arts

Financial Aid

U.S. and Canadian applicants requesting financial aid from Brandeis and/or an educational loan must submit financial aid transcripts from previously attended colleges or universities and a GAPSFAS form. The GAPSFAS form may be obtained from your college's Career Planning or Financial Aid office or by writing to the Graduate and Professional School Financial Aid Service, P.O. Box 23900, Oakland, CA 94623-0900.





Application for Admission

or Pacific Islander

☐ Other (please specify)

Graduate School of Arts and Sciences P.O. Box 9110 Waltham, Massachusetts 02254-9110

General	Information
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General Information	Graduate Program		Session beginning September 19				
	Name						
	First	Middle	Family name or surname				
	How do you wish to be address	ed? Mr./Ms/Other					
	Social Security no.						
	Proposed degree status	A. DM.F.A. DPh.D.	☐ Special Student status (nondegree)				
	Do you intend to apply for finance	ial assistance? Yes	□ No				
	Date of birth	Marital status	Number of dependents				
	Country of citizenship		Permanent resident of the U.S.?				
	Where else have you applied?						
ddresses	Permanent address						
	Telephone no.	\	Nork/daytime telephone				
	Mailing address (if different)						
	Telephone no.		Work√daytime telephone				
	Summer mailing address (Pleas	e include effective dates.)					
	Telephone no.	\	Work/daytime telephone				
	This section is optional. How we	uld you describe vourself?	Please check one option from each of the two				
	sections below.						
	1 ☐ Female 2 ☐ Male	☐ American Indian/ Alaskan Native☐ Black (non-Hispanic)	 ☐ Anglo Caucasian or White ☐ Asian (including Indian subcontinent) 				

☐ Hispanic (including Puerto Rican)

Educational Record	Colleges attended	Dates	Major field	Minor field	Degree and date		
	Graduate schools attended	Dates	Field of study		Degree and date		
	Supplementary education Have you been awarded any honors or prizes? Have you applied for any federal, state or national fellowships or other grants or aid? Please explain.						
	List your publications and any research projects with which you have been associated.						
	Foreign languages studied Number of Where Degree years studied proficie						
	Have you taken the Graduate Record Examination and/or the Test of English as a Foreign Language? List dates.						
	Give the names and addresses of the professors whom you have asked to write your letters of recommendation.						
Extracurricular Record	d List major extracurricular activities, detailing particularly those relevant to your proposed field of study.						
	Please attach resume or curriculum vitae, including summer employment.						
	I hereby certify that the information	ation given above and	in any attached documen	nts is complete and	accurate.		
	Signature of applicant			Date			



Application for Admission

Duplicate

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General Information	Graduate Program		Session beginning September 19		
	Nama				
	Name First	Middle	Family name or surname		
		addressed? Mr./Ms/Other			
	Social Security no.				
	Proposed degree statu	s □ M.A. □ M.F.A. □ Ph.D. □	Special Student status (nondegree)		
	Do you intend to apply for financial assistance? $\ \square$ Yes $\ \square$ No				
	Date of birth	Marital status	Number of dependents		
	Country of citizenship		Permanent resident of the U.S.?		
	Where else have you a	applied?			
ddresses	Permanent address				
	Telephone no.	W	ork/daytime telephone		
	Mailing address (if diffe	rent)			
	Telephone no.	W	ork/daytime telephone		
	Summer mailing address (Please include effective dates.)				
	Telephone no. Work/daytime telephone				
	This section is optional sections below.	How would you describe yourself? F	Please check one option from each of the two		
	1 ☐ Female ☐ Male	2	 ☐ Anglo Caucasian or White ☐ Asian (including 		
	Wale	☐ Black (non-Hispanic)	Indian subcontinent)		
		☐ Hispanic (including Puerto Rican)	or Pacific Islander Other (please specify)		

Educational Record	Colleges attended	Dates	Major field	Minor field	Degree and date		
	Graduate schools attended	Dates	Field of study		Degree and date		
	Supplementary education Have you been awarded any		allowehing or other grants	or aid? Plages over	lain		
	Have you applied for any federal, state or national fellowships or other grants or aid? Please explain. List your publications and any research projects with which you have been associated.						
	Foreign languages studied	Number of years studied	Where		Degree of proficiency		
	Have you taken the Graduate Record Examination and/or the Test of English as a Foreign Language? List dates						
	Give the names and addresses of the professors whom you have asked to write your letters of recommendation.						
xtracurricular Record	List major extracurricular activ	rities, detailing particu	larly those relevant to you	r proposed field of s	study.		
	Please attach resume or curri	culum vitae, including	summer employment.				
	I hereby certify that the information given above and in any attached documents is complete and accurate.						
	Signature of applicant			Date			



Graduate School of Arts and Sciences

Name printed

Address

P.O. Box 9110 Waltham, Massachusetts 02254-9110 Letter of Recommendation to Supplement Application for Admission

G	iame or App						
_		Name of Applicant First				Family name or surname	
C	araduate Pro	ogram					
] I waive	☐ do not waive my righ	t to read this letter	Signature of applicar	nt	Date	
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are comparable in age and position.	Upper 1 to 2%	Upper 10%, but not upper 1 or 2%	Upper 25%, but not upper 10%	Upper half, but not upper 25%	Lower half	No basis for judgment	
others you have known who are comparable in age and position. Native intellectual ability		but not upper	but not upper	but not upper	Lower half		
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Applicant						
	Name of Applic					
Recommender		First		Middle		Family name or suman
	Graduate Prog	ram				
	□ I waive □	do not waive my righ	t to read this letter	Signature of applica	nt	Date
	Graduate Scho Graduate Scho applicant's abil achieve a succ for your opinior	wo copies directly to the old appreciate your old will appreciate your ity to undertake advan ressful professional ca a also will be appreciate at etween strong and will be appreciate and will be appreciate and will be and will be appreciate and will be appreciate and will be appreciate and and and and and and and and	n above. The opinion of the ced studies and reer. The basis led. A careful	characteristics is in the long run more helpful than routine praise. If possible, please compare this applicant with other students who have recently attended or applied to this Graduate School. If additional space is needed, please attach a separate page.		
Please rate the applicant with others you have known who are comparable in age and position.	Upper 1 to 2%	Upper 10%, but not upper 1 or 2%	Upper 25%, but not upper 10%	Upper half, but not upper 25%	Lower half	No basis for judgment
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Position





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